On-Street Car Sharing Pilot Program

Evaluation Report

JANUARY 2017

SFMTA
Municipal Transportation Agency

EXECUTIVE SUMMARY

GOAL: "MAKE TRANSIT, WALKING, BICYCLING, TAXI, RIDE SHARING AND CARSHARING THE PREFERRED MEANS OF TRAVEL." (SFMTA STRATEGIC PLAN)

As part of SF*park* and the San Francisco Municipal Transportation Agency's (SFMTA) effort to better manage parking demand, the SFMTA conducted a pilot of twelve on-street car share spaces (pods) in 2011-2012. The SFMTA then carried out a large-scale pilot to test the use of on-street parking spaces as pods for shared vehicles. The On-Street Car Share Parking Permit Pilot (Pilot) was approved by the SFMTA's Board of Directors in July 2013 and has been operational since April 2014. This report presents an evaluation of the Pilot.

Data from participating car share organizations show that the Pilot pods performed well, increased awareness of car sharing overall, and suggest demand for on-street spaces in the future. Performance of the spaces was analyzed for how many individual users accessed a space, how long the trips were, and how often the vehicle was rented, among other factors. An on-street car share vehicle was judged to perform well if it was:

- Available for reservation most of the time
- Used frequently
- Used by many unique users
- Used for short trips

Findings

- On-street car share vehicles were in use an average of six hours per day
- 80% of vehicles were shared by at least ten unique users
- An average of 19 unique users shared each vehicle monthly
- 17% of car share members reported selling or donating a car due to car sharing

Placing car share spaces on-street increases shared vehicle access, convenience, and visibility. We estimate that car sharing as a whole has eliminated thousands of vehicles from San Francisco streets. The Pilot showed promise as a tool to extend the benefits of car sharing and allow more people to live with fewer cars or no car at all.

Challenges

- Some neighbors didn't like on-street spaces used for this purpose
- Theft and vandalism of shared vehicles
- Implementation coordination
- Construction and street closures

Because construction permitting is not controlled by the SFMTA and street closures are not always communicated to the SFMTA, unpredictable street closures can take car share pods off-line for days or months, diminishing the utility and reliability of the service.

An Overview of Car Sharing

The Transportation Research Board describes car sharing a "mobility option that allows individuals to pay for and use automobiles on an as-needed basis through membership programs."[1] Car sharing differs from conventional car rental because car share vehicles typically are reserved and utilized in small (usually hourly) increments with round-the-clock unattended access to cars with no rental office or staff required. Insurance and fuel charges are usually incorporated into hourly rates.

Car sharing businesses have existed in San Francisco for 15 years. City CarShare was founded in San Francisco 2001, and for-profit car share organization (CSOs) entered the San Francisco market a few years later.

Car sharing differs from carpooling and ride sharing, in which one or more passengers share a ride to the same destination as a vehicle's driver. Car sharing is also different from ride hailing or ride sourcing, also referred to as transportation network company (TNC) ride sharing, which effectively is a taxicab or limousine service managed by a smart phone app platform.

Benefits of car sharing

Car sharing has been shown by academic analysis of to achieve the following effects:

Reduced automobile ownership rates
By having access to a vehicle households often give up a second or third vehicle. Some forgo vehicle ownership entirely. One comprehensive study showed that every shared car replaces as many as 13 private vehicles.[2] Lower car ownership rates reduce overall parking demand, especially in residential and mixed-use areas.

Reduced vehicle miles traveled (VMT)
Overall, members of CSOs travel fewer miles by car than car owners, which helps to reduce congestion and parking demand.[3] One estimate concluded that each shared vehicle leads to about 18,000 fewer VMT every year.[4]

Reduced greenhouse and other emissions
Reducing VMT translates to reducing greenhouse gas emissions. On average, by reducing VMT and using fuel efficient vehicles with low emissions profiles, each

1 Transit Cooperative Research Program. 2005. Report No. 108: Car Sharing: Where and How it Succeeds.

2 Martin, Elliot, Susan Shaheen, and Jeffrey Lidicker. 2010. Impact of Carsharing on Household Vehicle Holdings: Results from North American Shared-Use Vehicle Survey. Transportation Research Record: No. 2143: 150–158.

3 Martin, Elliot, and Susan Shaheen. 2011. The Impact of Carsharing on Public Transit and Non-Motorized Travel: An Exploration of North American Carsharing Survey Data. Energies 2011, 4: 2094-2114. Cervero, Robert and Yushin Tasi. 2004. City CarShare in San Francisco, California: Second-Year Travel Demand and Car Ownership Impacts. Transportation Research Record No. 1887: 117-127. Cervero, Robert, Aaron Golub, and Brendan Nee. 2006. San Francisco City CarShare: Longer-Term Travel-Demand and Car Ownership Impacts. Working Paper.

4 Osgood, Andrea. 2007. Curb Dreams: Allocating On-Street Parking for Carsharing. Unpublished master's thesis. University of California, Los Angeles.

shared vehicle reduces carbon dioxide emissions by an estimated seven tons every year.[5] Shared vehicles tend to be used more frequently, which reduces the number of cold starts, further lowering emissions when compared to private automobiles.

Reduced household transportation expenses and increased economic reinvestment

AAA estimates the average US car costs $8,698 per year to operate.[6] Some of these savings are reinvested in the local economy.

More walking, bicycling, and transit use

San Franciscans already walk, bike, and use public transit more than most people in the nation. However, those who are members of CSOs do so more than non-members, with 77% of trips compared to 67%, respectively.[7]

SFMTA's interest in car sharing

The SFMTA's car sharing policy is intended to expand the availability of car sharing across San Francisco, increase the usage of car sharing, and preserve or increase choice of CSOs. CSOs report that one of the key challenges for expanding car sharing is the difficulty of acquiring parking spaces for car sharing parking or pods, which are locations where customers can pick up a car sharing vehicle. The SFMTA can use parking policy to encourage and facilitate car sharing, thereby realizing more of its benefits.

"CORE VALUES FOR THE TRANSPORTATION NETWORK:
TRANSIT FIRST:
TRANSIT, WALKING, BICYCLING, TAXI, **CAR SHARING**, AND RIDE SHARING HAVE THE HIGHEST PRIORITY. " (SFMTA STRATEGIC PLAN)

The SFMTA can advance a number of key objectives in its 2013-2018 Strategic Plan by facilitating the expansion of car sharing. These include increasing travel by non-private automobile (Objective 2.3), improving parking management (Objective 2.4), and reducing resource consumption and emissions (Objective 3.1). In combination with the SFMTA's efforts to better utilize transportation demand management strategies, improve parking management, and make transit, walking, and bicycling more attractive, car sharing

5 Martin, Elliot, and Susan A. Shaheen. 2011. Greenhouse Gas Emission Impacts of Carsharing in North America, IEEE Transactions on Intelligent Transportation Systems, Vol. 12, No. 4: 1074-1086.

6 Stepp, Erin. "Annual Cost to Own and Operate a Vehicle Falls to $8,698, Finds AAA." American Automobile Association, April 28 (2015).

7 Cervero, Robert, Aaron Golub, and Brendan Nee. 2006. San Francisco City CarShare: Longer-Term Travel-Demand and Car Ownership Impacts. Working Paper.

helps achieve all these goals.

Additionally car sharing supports San Francisco's "Transit-First Policy." The policy states: "Decisions regarding the use of limited public street and sidewalk space shall encourage the use of public rights of way by pedestrians, bicyclists, and public transit, and shall strive to reduce traffic and improve public health and safety." On-street car sharing increases access to shared vehicles, thereby using the public right-of-way to reduce traffic and improve public health through decreased vehicle ownership, decreased emissions, and increased street safety.

Models of car sharing

For many years, car sharing described a service where a member reserves a vehicle, picks it up at a designated location, and returns the vehicle to the same location. However, new organizations and models have expanded the definition of car sharing. Car sharing business models include:

Traditional
City CarShare and Zipcar have operated the round-trip model in San Francisco and the Bay Area for many years. In this model, car share organizations own and maintain a fleet of vehicles. The traditional model has been well-studied by academic researchers and has been proven to deliver the benefits described above.

Peer-to-peer
These services have the same model as traditional round-trip car sharing organizations, but rather than owning a fleet these services allow individuals to rent their privately-owned vehicles to other members via a matching service. Companies that use the peer-to-peer model include Getaround and Turo (formerly RelayRides).

One-way
These services allow members to pick up a vehicle parked near them, make a trip, and leave the shared vehicle at a different location anywhere within a defined operation area, typically at an on-street parking space. One-way car sharing requires a permit that exempts the shared vehicle from parking meter payment and/or time limits (though still subject to regulations such as street cleaning, peak-period tow away, passenger and commercial loading zones, etc.). Car2go and ReachNow are one-way car sharing organizations operating in numerous U.S., Canadian, and European cities. The Pilot did not test one-way car sharing services.

On-street Pilot Permit Program

Genesis and premise of the Pilot

In July 2013, the SFMTA adopted a formal policy[1] to guide the agency's facilitation of car sharing in its off-street parking lots and garages, as well as approving a pilot test of on-street parking spaces as car share spaces or pods. The Pilot built upon lessons learned from a small-scale pilot of on-street car share pods carried out in 2011 and 2012, and made hundreds of on-street parking spaces available across the city by qualified Car Share Organizations (CSOs).

As the managers of most of San Francisco's on-street parking and hundreds of miles of curb, the SFMTA used the Pilot to test expansion of availability of car sharing across San Francisco as a tool to increase mobility for San Francisco residents and workers.

Pilot participation requirements

Participants in the Pilot had to meet several operational and maintenance requirements to be granted any permitted on-street car share parking spaces:

- Participating organizations must meet the definition of Car Share Organization contained in San Francisco Transportation Code Section 911 (a) (6).
- Vehicles may be available only to members by reservation on an hourly basis, or in smaller intervals, and at rates based on time or time and distance.
- Vehicles are available to members at an unstaffed self-service location and available for pick-up by members on a twenty-four hour, seven days per week basis.
- Vehicles must be available to members for rental at least seventy-five (75) percent of the time during any given month when the vehicle is parked in a designated on-street car share parking space.
- Vehicles must be made available to members citywide with at least fifteen (15) percent of their total fleet located in On-Street Car Share Zone 2 and fifteen (15) percent in On-Street Car Share Zone 3.
- CSOs must provide to the SFMTA at the beginning of the Pilot and on a quarterly basis the following information (See Appendix C for full conditions):

    1. Member counts by zip code.
    2. Vehicle locations (off-street and on-street).
    3. Average monthly trip durations (hours) and vehicle miles traveled for each permitted space.
    4. Average utilization rate for each permitted space.
    5. Average unique users accessing each permitted space.
    6. Member surveys of travel behavior, vehicle ownership, and car sharing use.

1 https://sfmta.com/sites/default/files/projects/SFMTA Car Sharing Policy_MTAB_20130716.pdf

Figure 1. On-Street car share permit pricing zones

The Pilot used price incentives and minimum requirements in the city's outer neighborhoods as mechanisms to distribute car sharing across the city. Figure 1 shows the geographical boundaries of the pricing zones. The fees per space by zone: $225 in Zone 1, $150 in Zone 2, and $50 in Zone 3. CSOs were required to locate at least 15% of their spaces within Zones 2 as well as Zone 3 with the remaining spaces in Zone 1.

The SFMTA based permit fees on a cost recovery model, meaning that the revenue generated from permit fees would cover the costs of administering and enforcing the program. The SFMTA billed CSOs on a quarterly basis for their permit fees. Cost recovery calculations also included lost parking meter revenue for metered spaces.

Designating Car Share Spaces

Call for participation

In October 2013 interested entities were invited to present their case for recognition as CSOs and their commitment to participate in the pilot program and its requirements for outreach, data collection, pod placement, and vehicle availability (see Appendix A, "Call for Participation"). Three of the five entities that expressed interest in participating in the pilot qualified: City CarShare, Zipcar, and Getaround.

Space proposal and review

Each CSO proposed 150 parking space locations; this group of 450 proposed locations. The requests were aggregated into a single map and reviewed to make sure there were no with more than two proposed spaces on any block. Four such cases were found and quickly resolved by relocating proposed spaces with the agreement of the CSOs.

Internal review, outreach, and legislation

The 450 proposed spaces were then reviewed by other SFMTA divisions and other City agencies (Department of Public Works and Planning). Some proposed locations were relocated or deprioritized based on whether or not they conflicted with other projects, Muni operations, or future disabled parking zones.

As proposed locations cleared internal review, outreach efforts for specific parking spaces began. SFMTA provided CSO representatives a cover letter that described the Pilot and gave contact information for the SFMTA project manager (see Appendix B). For each proposed permitted parking space, CSOs were required to talk with the fronting property owner (and tenant if applicable), adjacent property owners (and tenants if applicable), and business owners/managers (rather than staff or clerks). CSOs were also encouraged to speak with other residents and businesses in the vicinity of a proposed parking space, in the interest of general car share outreach as well as outreach regarding each particular proposed car share space.

As community conversations went forward, concerns and objections sometimes resulted in moving proposed spaces to alternate locations, in some cases multiple times. In some instances, proposed spaces were withdrawn altogether.

After outreach and review, groups of parking space proposals were brought to public hearing. Six groups of parking space proposals were brought to public hearing (May 16, June 13, July 11, July 18, August 15, 2014; February 2, 2015). Of those spaces heard and deemed fit to proceed to approval, five groups were brought to the SFMTA Board of Directors for deliberation and approval (June 24, July 15, August 19, 2014; January 20, March 3, 2015).

Implementation

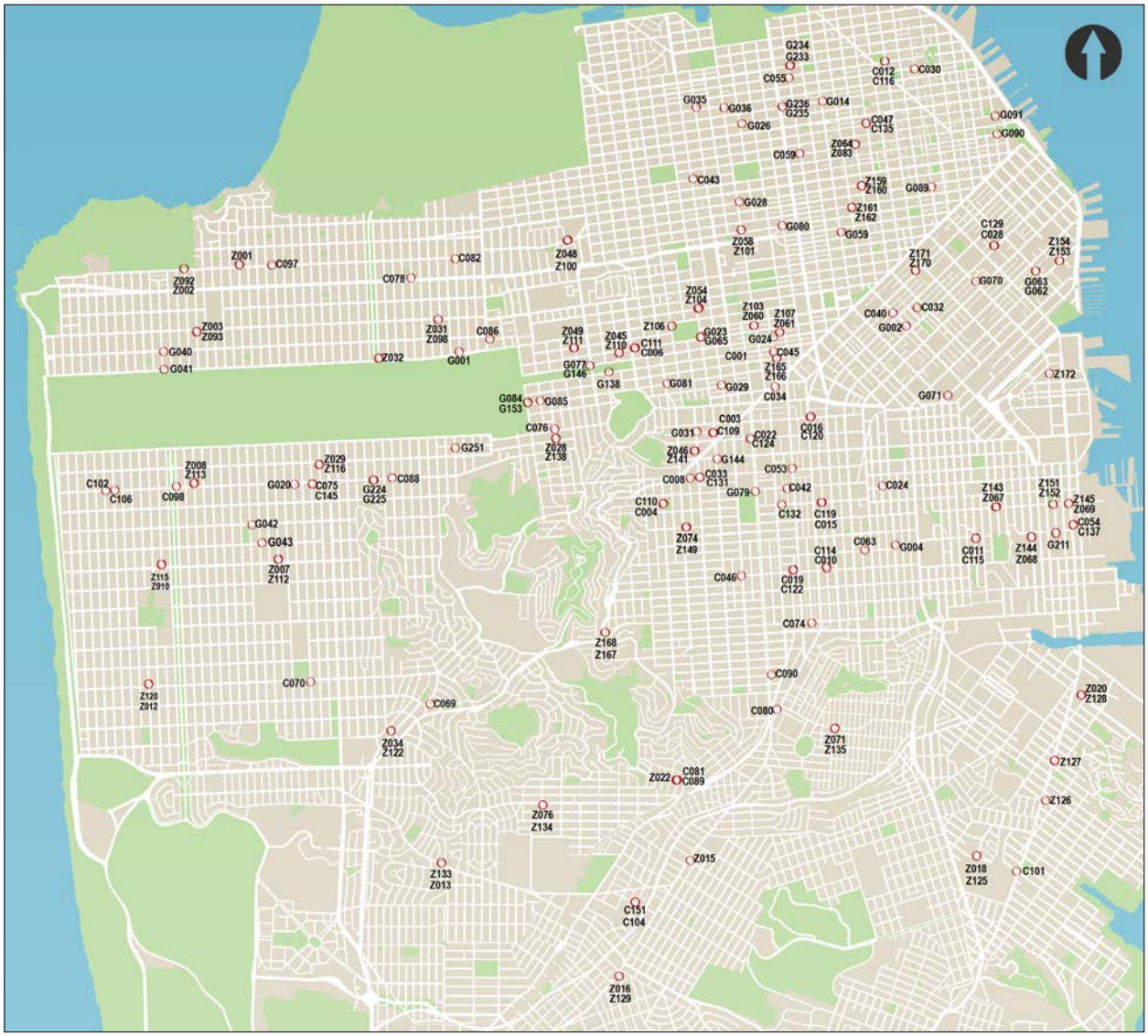
Spaces installed

From October 2014 through August 2015, 202 on-street car share parking spaces were marked by the SFMTA's Field Operations teams (12 City CarShare spaces established in the initial pilot were folded into the larger Pilot). A low, two sided sign was affixed to a post adjacent to the space, with a "Car Share Vehicle Only / Tow Zone" message on the street face and the permitted car share organization's logo on the sidewalk face. In the case of metered spaces, the meter head was removed and the signs were affixed to the meter post. Red curb was painted to mark the curb as a tow away zone and a white painted "batter's box" delineated the boundaries of the space on the street. See Figure 2 for an example of an on-street car share space.

Spaces were identified by a 4-character ID in the pattern "X999", where "X" was the CSO initial (C=City CarShare, G=Getaround, Z=Zipcar) and "999" was a sequential number from 001 to 999. See Appendix H for a full list of implemented Pilot spaces, as well Appendix I for a list of spaces removed, relocated, adjusted, or transferred between CSOs.

Figure 2. On-street car share space

Figure 3. All on-street car share spaces, Fall 2016



Data Analysis

Participating CSOs were required to report monthly utilization data to SFMTA for all permitted on-street spaces (see Appendix F, Data Dictionary). Monthly reported data spans from January 1, 2015 to July 1, 2016. Not all on-street car share spaces remained operational throughout the Pilot and some spaces were not operational until April 2015. This evaluation uses data from April 1, 2015 to April 1, 2016 unless otherwise specified.

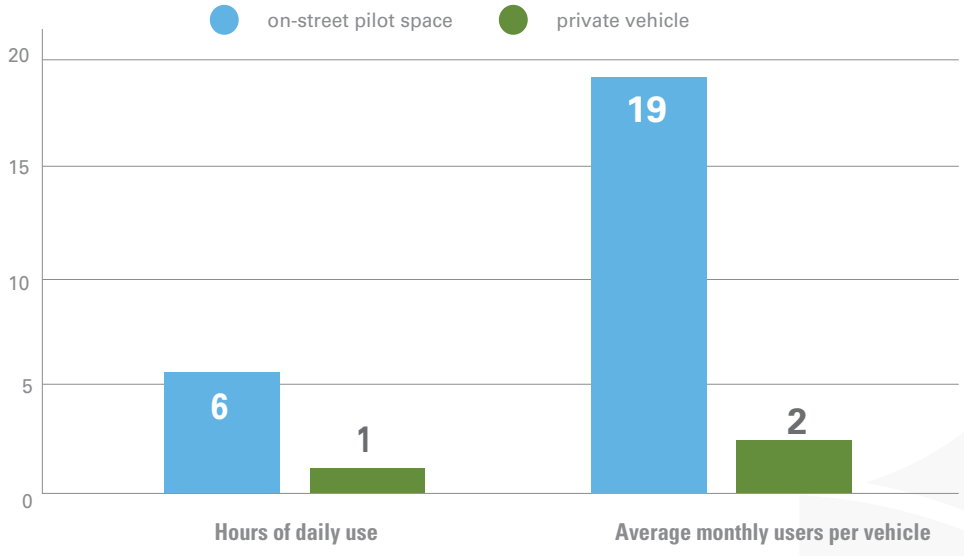
The SFMTA evaluated the performance of on-street car share spaces based mainly on the following metrics:

- *Unique users* - (unique people who reserved the car in that space for use)
- *Utilization rate* - (percent of time car was in use by members)
- *Availability rate* - (monthly hours a vehicle was made available for rental)
- *Vehicle miles traveled* - (miles traveled per reservation)
- *Trip duration* - (the duration per reservation)

Key findings

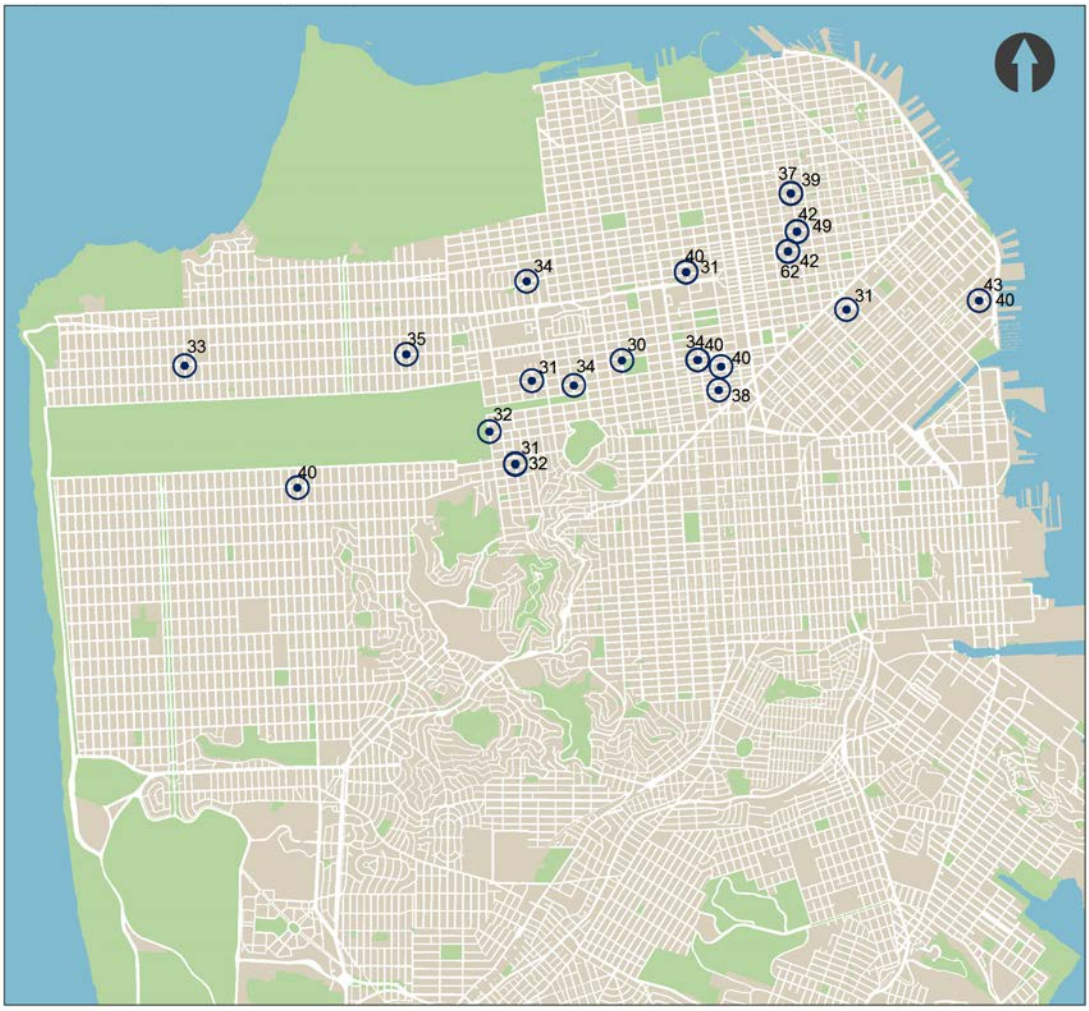
Pilot on-street pods were used by many different people. On average, each car share vehicle was shared by 19 individual users each month. Car share vehicles were used for an average of six hours a day. This is much higher than the national average for private vehicle usage, which is 1.2 hours per day. Most car share members in San Francisco do not own a personal vehicle; of those who did, 17% report having sold or donated a vehicle as a direct result of car sharing. The data also showed that 80% of the on-street car share spaces were shared between more than ten people monthly.

Figure 4. Pilot average vehicle use versus private average vehicle use



Source: *USDOT 2009 National Household Travel Survey.*

Figure 5. Spaces with 25 highest average monthly unique users



Unique users

Unique users are the number of individuals accessing each on-street space. The number of unique users indicates how well the curb space was utilized and how many people it served each month. The average monthly unique users per space was 19. Table 1 shows the ten highest and lowest spaces for monthly unique users and the average for comparison.

Figure 5 shows the top 25 spaces for average monthly unique users. They are distributed along the northern half of the city and 14 of them are groups of two spaces in one location, or "double pods". They range from an average of 30 unique monthly users per space to 62.

The number of unique users is necessarily a reflection of availability—the more time a car is available, the more people can use it. In addition, it follows that spaces with high numbers of unique users tend to perform well in other key metrics such as utilization rates, trip duration, and miles

Table 1. Top and bottom 10 average unique users by space and pilot average

Space ID	Pricing Zone	Availability Rate	Average Reservations Per Day	Average VMT Per Reservation	Average Trip Duration (Hours)	Utilization Rate	Average Hours of Daily Use	Average Monthly Unique Reservers
Z162	1	93%	3.2	35.4	4.2	43%	12.3	62
Z159	1	93%	2.7	31.7	4.0	46%	10.3	49
Z154	1	98%	2.0	44.1	5.1	37%	9.6	43
Z161	1	90%	2.1	46.9	6.4	51%	12.0	42
Z160	1	92%	2.1	49.7	6.7	48%	12.8	42
Z101	1	88%	2.0	38.9	4.7	37%	8.0	40
Z107	1	92%	1.9	42.9	5.5	41%	9.6	40
Z153	1	92%	2.1	44.3	4.9	39%	9.4	40
Z029	2	91%	2.1	38.4	4.3	38%	8.1	40
Z060	1	88%	2.0	38.3	4.6	35%	8.0	40
Average	n/a	85%	1.0	47.0	7.6	28%	5.7	19
Z128	3	70%	0.5	64.4	8.6	26%	2.7	6
C028	1	63%	0.5	52.7	6.3	4%	1.8	6
C125	1	44%	0.6	53.1	7.0	9%	1.7	5
Z020	3	66%	0.3	64.9	11.6	21%	2.5	5
G205	2	18%	1.1	105.1	15.8	34%	2.9	5
G036	1	88%	0.2	80.0	16.0	13%	2.8	5
C115	1	54%	0.3	43.7	6.6	5%	1.2	4
C126	1	25%	0.8	20.1	3.0	4%	0.6	4
C011	1	60%	0.2	32.1	7.8	7%	1.1	2
G236	1	73%	0.1	62.8	17.7	7%	1.3	2

traveled. The spaces with the ten highest average monthly unique users (shown in Table 1) all have availability rates of 88% or higher, approximately double the average reservations per day, and shorter trip durations than average. Their utilization rates are well above the average of 28%.

Utilization rates

Utilization rate is the proportion of time a shared vehicle is in use. It is calculated as the amount of time a car is reserved divided by the monthly hours of operation. CSOs need the utilization rate to be high enough so that the space is well used and low enough so that there will be a car available when another user wants to reserve it.

The average monthly utilization rates ranged from seven to 88%, with an average of 28%. The utilization rate is typically indicative of the space's overall performance. However, a space that is used by just a few people

for long periods of time could have a high utilization rate, but would not qualify as a high-performing space because of the low number of unique users. In addition, a low-performing space could have a high utilization rate simply because it was not available very often.

For example, Table 2 below shows that space G205 had a utilization rate of 68% (well above the average), but it was only available 18% of the time, was used by an average of only five unique users a month, and had an average trip duration of 15.8 hours, more than twice the overall average.

Operating hours and availability rate

Operating hours are the hours a vehicle was available for reservation. *Availability rate* is the operating hours divided by the total hours in the month. To assure a certain level of access for the public, the SFMTA set a minimum availability rate of 75%, meaning a vehicle must be available for reservation for 75% of the hours in a given month. Average monthly availability rates per space ranged from 13% to 100% for individual spaces and the Pilot average (for all spaces) was 85%. Over 77% of spaces met the availability rate threshold.

Factors affecting the operating hours rate included theft, repair, vandalism, street closures, and towed vehicles.

Zipcar recorded 79 instances of vandalism, theft or attempted theft of their on-street vehicle fleet in 2015, and 88 instances in 2016. City CarShare confirmed similar theft and vandalism issues for their on-street fleet and Getaround reported six vandalism incidents over the entire Pilot.

Availability rates for Getaround vehicles are affected by the fact that Getaround does not own and operate its fleet. As a peer-to-peer CSO, Getaround is reliant upon private vehicle owners to make their vehicles available. The monthly availability rate for Getaround spaces can be significantly reduced if a private vehicle owner does not make the car available for renting, stops participating for any reason, or takes

Figure 6. Average availability rates by CSO

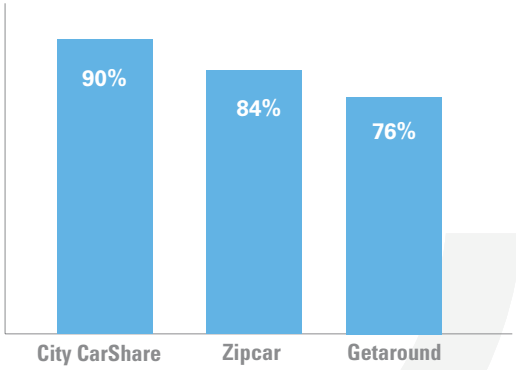


Table 2. Pilot average for space G205

Space ID	Availability Rate	Average Reservations Per Day	Average VMT Per Reservation	Average Trip Duration (Hours)	Utilization Rate	Average monthly Unique Reservers
G205	18%	1	105.1	15.8	68%	5

a vehicle off-line for repairs, in addition to any theft or vandalism of the car.

Figure 7 shows the average operating hours for all on-street car share spaces by month between April 1, 2015 and April 1, 2016.

Vehicle miles traveled and trip duration

Vehicle miles traveled (VMT) are the miles traveled per reservation (or trip). *Trip duration* is the amount of hours each trip takes. The average monthly VMT ranged between four and 129 per space while the average trip durations ranged from three to 26 hours per space, with an average of 8 hours. While it is possible to have a longer trip duration with low VMT, the aggregated data shows a correlation between trip duration and VMT. As shown in Figure 8, trip durations generally correlate with VMT per trip.

The two different participating models of car sharing performed differently in the case of average trip durations per space and average VMT per space. The top 20 spaces for the longest average trip durations were Getaround spaces. Additionally, 17 out of the 20 highest spaces for average VMT per space were Getaround spaces. These two metrics alone do not indicate overall performance.

Overall performance of spaces

An optimal on-street car share vehicle should be available for reservation most of the time, used frequently by many individual users, and used for shorter trips. As such, a combination of metrics was used to evaluate performance, as no one metric is indicative of high or low performance on its own. High performing spaces had:

- A large number of unique users
- A high monthly operating hours rate
- Shorter average VMT and trip duration

Pricing zones were intended to incentivize

Figure 7. Average monthly operating hours all spaces between April 2015 to April 2016

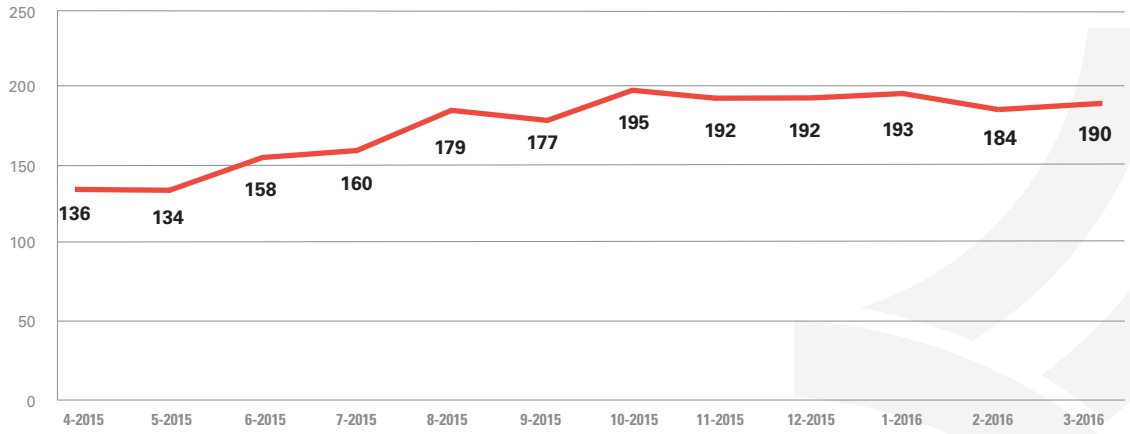
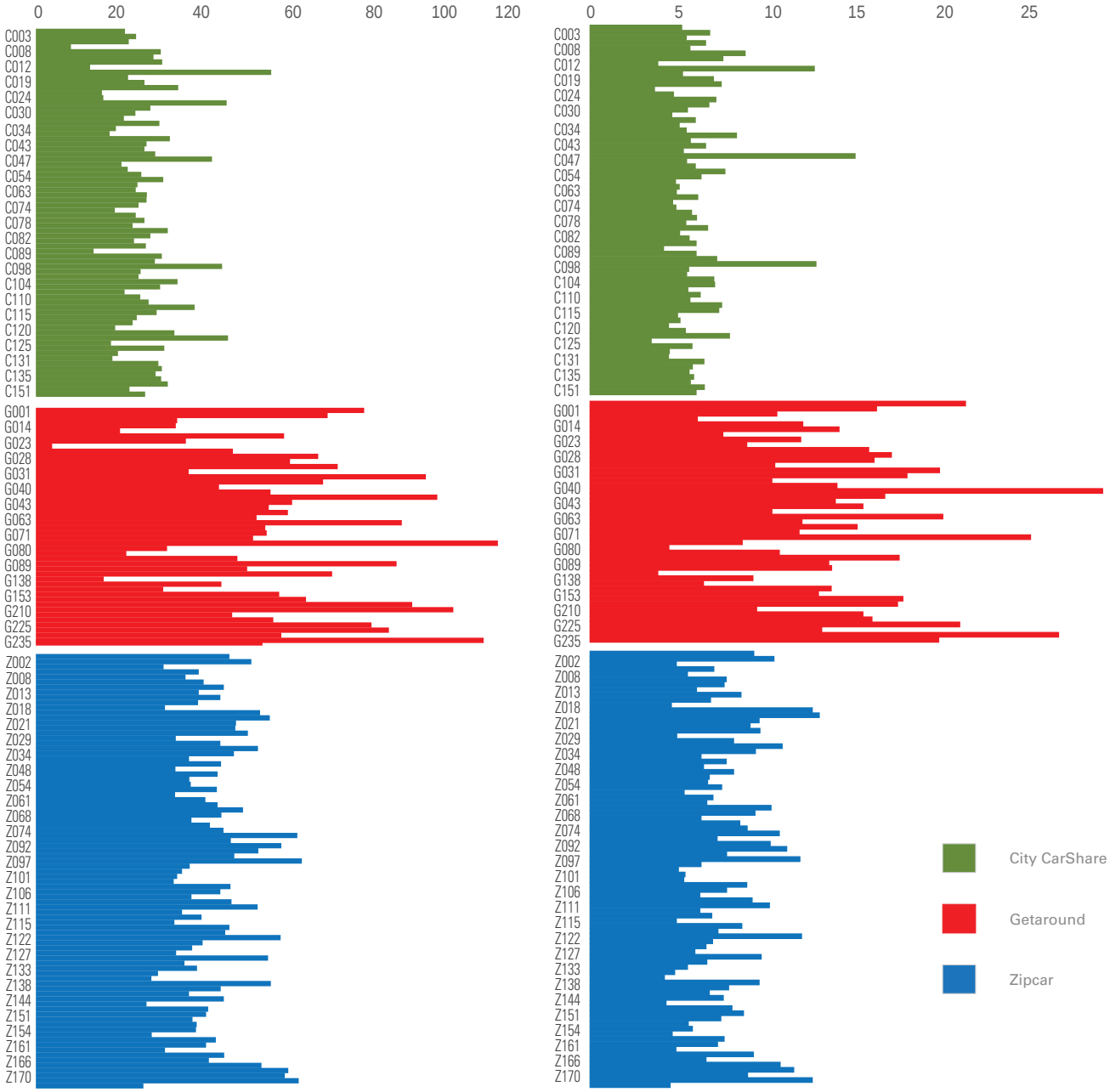


Figure 8. Average trip duration per space and average vehicle miles traveled per space from April 2015 to April 2016



CSOs to place cars all over the city. At the outset of the Pilot, the expectation was that spaces in Zone 1 would perform the best because of its higher population density, followed by spaces in Zone 2 then Zone 3. Data confirmed the expectation for the most part, but some spaces in Zones 2 and 3 performed better than expected. Of the top half of spaces in terms of unique users, 59% were in Zone 1, 23% in Zone 2 and 18% in Zone 3. Zipcar reported that many members in the Outer Richmond district requested on-street spaces in their neighborhood, demonstrating demand in lower-density areas of the city.

Pilot car share pods had either one or two parking spaces. Spaces within double-space pods outperformed spaces within single-space pods by a significant margin. Figure 9 shows that spaces within double pods saw 1.1 average reservations per day, while spaces in single pods saw fewer than 0.8 reservations per day. In addition, 86% of the top 50 spaces for unique users were within double-space pods. Possible explanations for this may include the added visibility and access provided by two vehicles over just one.[1]

1Tyburski, John [Zipcar Operations Manager]. Personal interview. 22 July 2016.

Figure 9. Average daily reservations for all spaces within a "single" or "double" pod

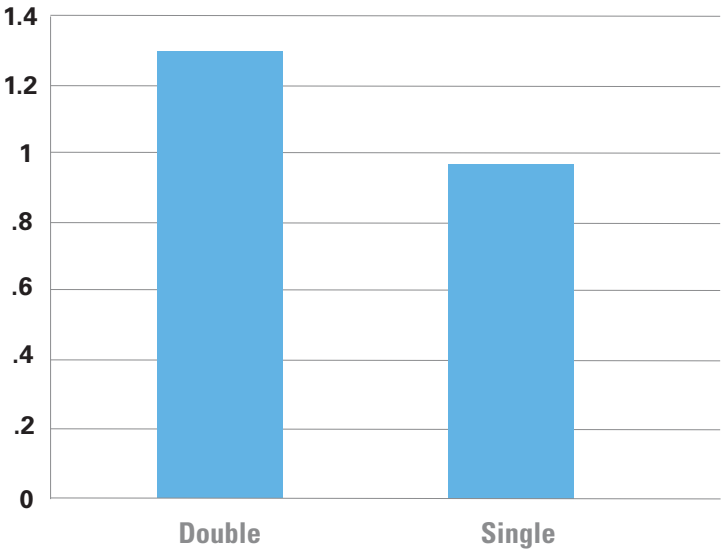
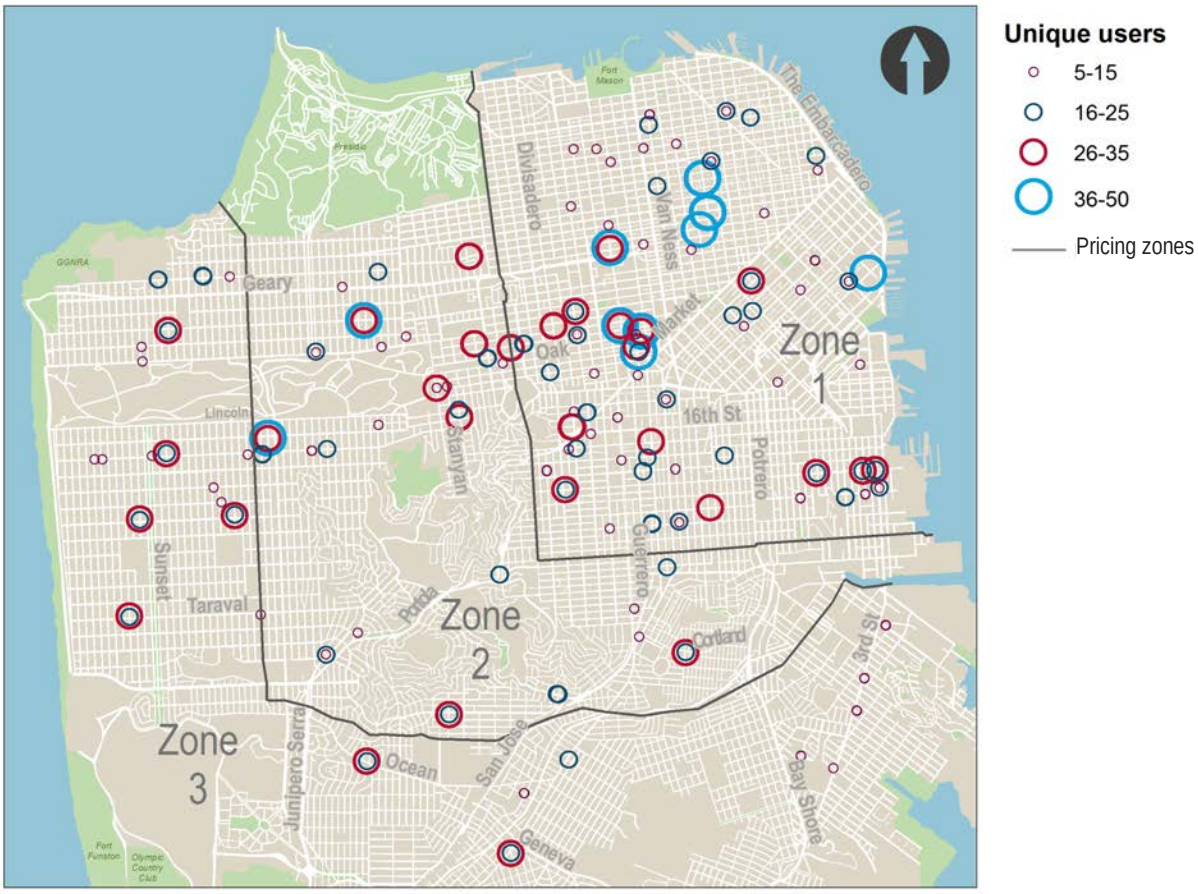


Figure 10. Average monthly unique reservers by space from April 2015 to April 2016



Vehicle Fleet and Membership Data

All three CSOs had spaces in off-street locations before the Pilot began. City CarShare had twelve on-street spaces from the initial smaller pilot described earlier in this evaluation. Getaround also had an on-street floating car fleet before this Pilot began. City CarShare and Zipcar's off-street car share spaces have declined over the Pilot as lots that housed dedicated car sharing spaces have been redeveloped into housing, office or retail space; this ongoing redevelopment of surface parking lots was one of the premises for the Pilot.

Part of Getaround's fleet are free-floating on-street, i.e. not fixed and permitted by the SFMTA. As of August 2016, 695 are free-floating vehicles.

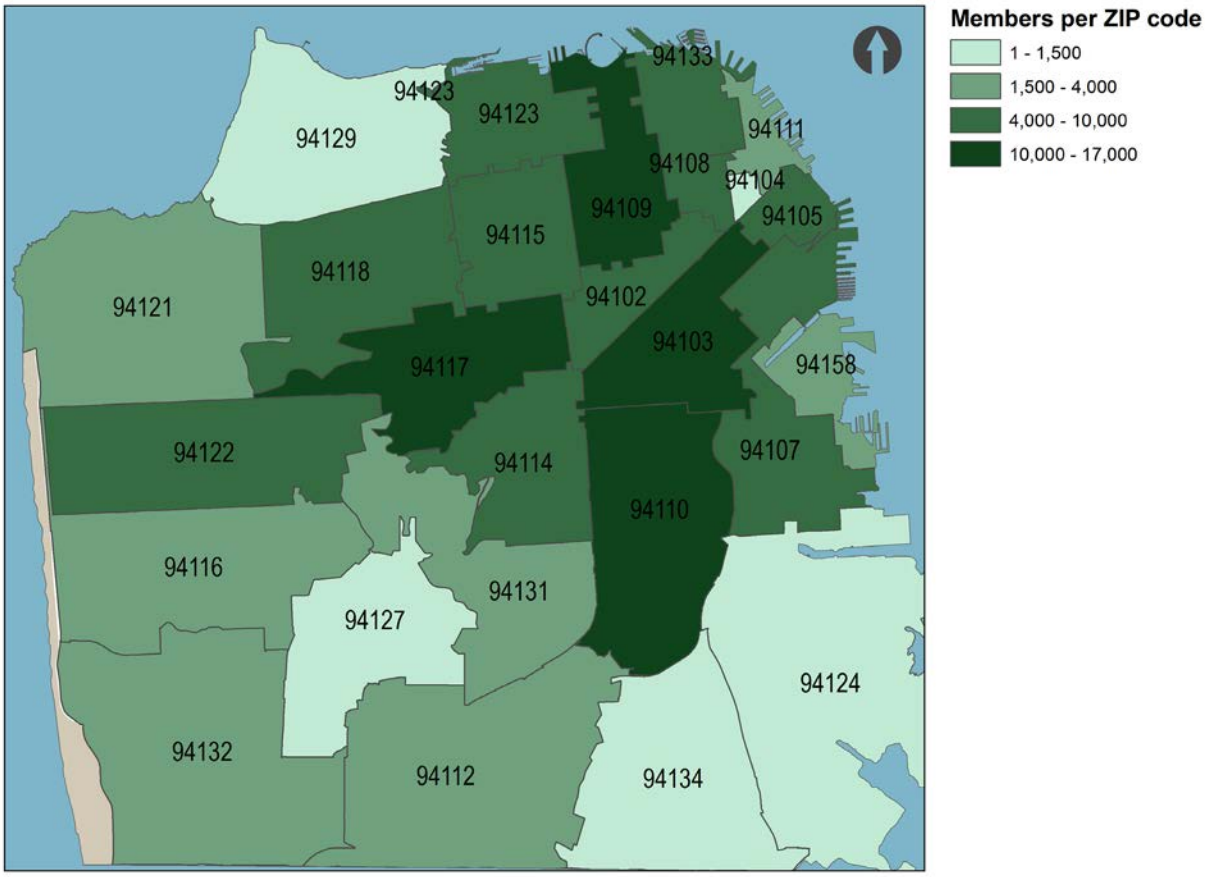
CSOs provided their membership by ZIP code in 2015 and 2016 (corresponding with both member survey periods). Of the ten ZIP codes with the highest amount of SF car share members in 2015, eight remained in the top ten for 2016. Figure 11 shows the total membership by ZIP code of all three CSOs in 2016. Nob Hill, Russian Hill (94109), the Mission, Bernal Heights (94110), Haight-Ashbury, Cole Valley (94117), and SOMA (94103) are the top neighborhoods for car share members.

Table 3. Total fleets of all three CSOs in 2015 and 2016

	2015 Fleet Total	2016 On-Street	2016 Off-Street	2016 Total Fleet	2016 % On-Street
Zipcar	888	85	744	829	10%
Getaround	486	44*	408	708*	6%
City CarShare	255	64	182	246	26%
Total	**1629**	**193**	**1334**	**1783**	**11%**

*Note: *These are SFMTA permitted, fixed spaces only. Getaround has a "free-floating" fleet on-street as well that is independent of this pilot. Source: SFMTA, CSO reported data. Getaround's total fleet includes their free-floating vehicles.*

Figure 11. San Francisco car share membership by ZIP code, Fall 2016



Member survey

Members from participating CSOs completed baseline "before" surveys in March 2015, and then completed identical "after" surveys in April 2016, though the survey was not necessarily completed by the same people. The surveys were open for a span of at least 31 days. The same survey was administered for both 2015 and 2016. (See Appendix E, "CSO Survey Instrument.") Survey data was self-reported by members, collected online by the CSOs, and then reported to the SFMTA. There were a total of 2,598 responses in 2015 and 3,080 responses in 2016. This analysis focuses only on respondents who live or work in San Francisco, which results in a final sample of 1,856 for 2015 and 2,798 for 2016, or approximately 2% of San Francisco car share members. The survey did not ask how recently car share members had rented an on-street vehicle.

Survey findings

The combined responses from all CSOs (2016 survey) had the following general characteristics:

- 71% of respondents do not own cars
- 75% of respondents had tried on-street car share by the end of the Pilot
- 52% of respondents found it easier to access car sharing as a result of on-street car share vehicles

Seventeen percent of respondents in 2016 sold or donated their vehicles as a result of having access to car sharing. Of those respondents, 99% said that access to car sharing was "somewhat or very important" in making the decision to sell or donate their car, and 34% did so specifically because of on-street car sharing. Using total 2016 car share membership counts and the percentage of people who reported selling or donating a vehicle, about 24,000 cars could potentially have been removed due to car sharing about 8,000 of those specifically due to on-street car sharing.

Car share member households with access to one vehicle may avoid purchasing another vehicle because of car sharing, whether they have already gotten rid of a car or not. Academic research suggests that access to car sharing allows up to 25% of members to suppress the purchase of an additional vehicle. When applied to San Francisco's car share membership, this suggests that approximately 36,000 vehicles were potentially not purchased. Combined with about 24,000 vehicles possibly sold or donated, a total of approximately 60,000 additional vehicles could be on the road if car sharing did not exist in San Francisco.

Table 4. Online survey respondent sample sizes

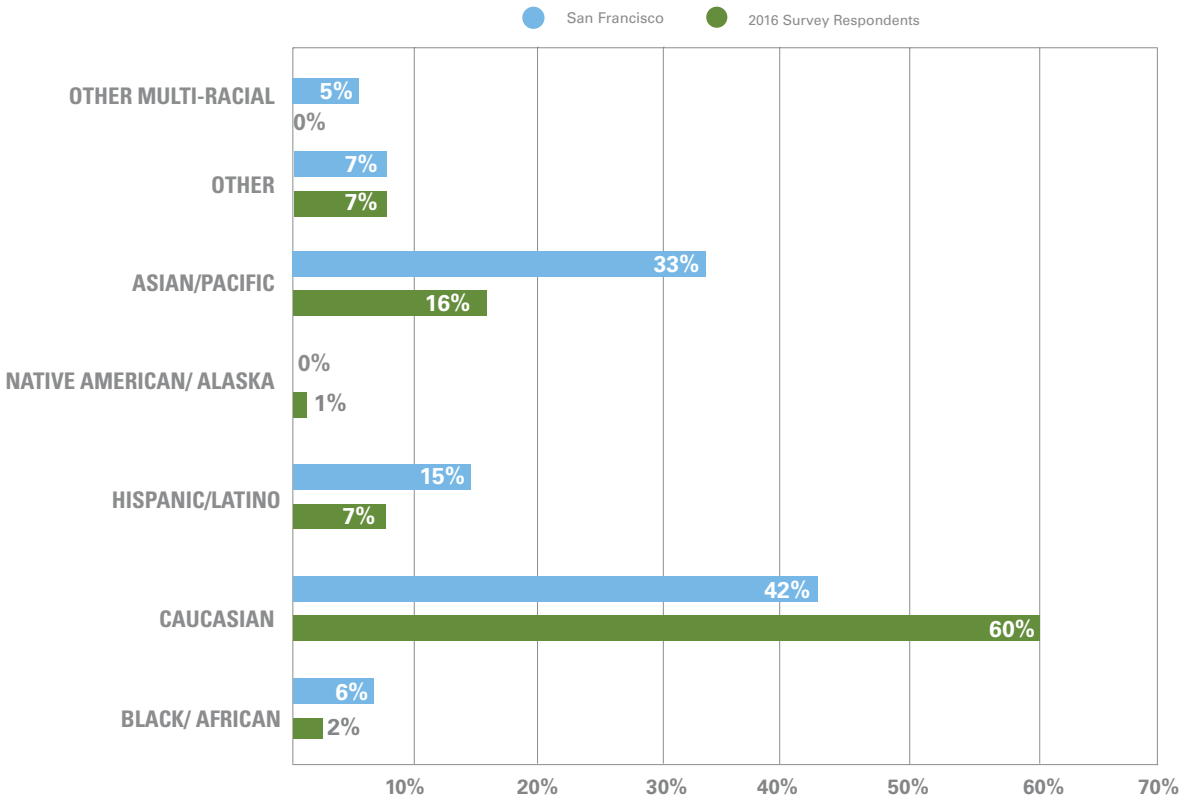
SF Members Surveyed	2015	2016
Total Respondents*	1,901	2,798
Total Membership	96,461	144,798
Sample Rate	2%	2%

**SF Zip Codes only*

Table 5. San Francisco Car share membership for all CSOs

SF Members Surveyed	2015	2016
Zipcar	55,511	50,027
Getaround	31,351	86,615
City CarShare	9,706	8,156
Total Membership	96,568	144,798

Figure 12. San Francisco car share membership demographics compared to San Francisco overall



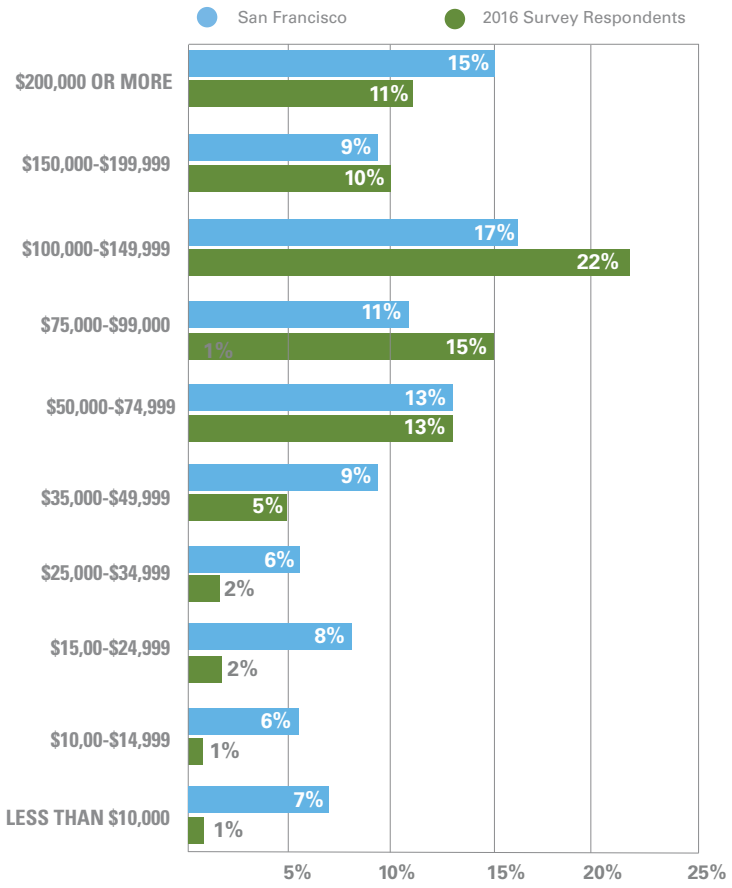
Source: US Census Bureau, SFMTA. Note: 2015 Population Estimates for "Asian" and "Caucasian" categories include Indian/Pakistani population and Middle Eastern populations respectively.

Member demographics

Among the 2016 survey respondents, 46% were between the ages 25-34, compared to the 22% of San Francisco's population in the same age range. Similarly, the percentage of 35-44 year olds from the car share membership was 8% higher than San Francisco's population. Demographic characteristics of the CSO survey respondents for income, gender, and age were consistent with the results seen in academic research on car sharing in North America.

A majority of respondents (68%) earn more than the median household income in San Francisco and 43% of them earn over $100,00 annually. Eighteen percent of the total respondents did not provide information about income. The car share membership population reflects a larger trend of people moving to San Francisco without cars, and access to car sharing likely contributes to this trend. In the 2016 survey, 71 respondents wrote in a response to cite on-street car sharing as the reason they have either gotten rid of a personal vehicle or have continued to not need one.

Figure 13. San Francisco car share membership average median incomes compared to San Francisco overall



Source: U.S. Census, SFMTA.

Limitations of the survey

Survey data was self-reported and there were no identifying member IDs to track individuals over the Pilot. It is not assumed that the same group of members who took the survey in 2015 also took it in 2016, but there likely was some overlap between the two groups.

The survey instrument used in both 2015 and 2016 did not address members who may have avoided or deferred purchasing a vehicle as a result of car sharing or on-street car sharing. However, much of the available research does include the suppression of car purchases in assessing the impacts of car sharing. SFMTA can use this research to draw conclusions about the number of car share members who avoided purchasing a vehicle as a result of access to car sharing.

Finally, because most Getaround vehicles park on-street but are not a part of SFMTA's

Pilot, references to "on-street" car share appear to have confused some Getaround members as to which on-street spaces were being referenced.

Operational Issues

The Pilot used an expeditious but thorough process to select, review, and legislate car share spaces (see "Space Proposal and Review," above). Given that permitted car share parking spaces are all existing parking spaces, little engineering review was necessary.

However, parking is a sensitive issue anywhere in San Francisco, and community concerns and objections to conversion of general parking (metered or un-metered) were prominent in the Pilot.

Space implementation

Once spaces were legislated, Pilot permits were issued to CSOs for legislated car share spaces and work orders issued to the SFMTA's Field Operations. As many as four shops were engaged in marking a car share space: Curb Paint, Street Paint, Sign, and Meter (if a metered space was being converted to a car share space). This presented challenges in quickly establishing a car share pod, given the need for the shops to work in coordination. In many cases, the space-marking process took a month or longer, with the parking space out of general use but not ready for car sharing use, adding to the community perception of "losing" the parking.

In general, determining that a space was ready for activation by the permittee CSO required visiting the location in person. In addition, in some cases CSOs were not able to place a car immediately upon completion of space marking due to communication or fleet-management issues.

Space closures

Construction

Curb and lane closures due to construction are common in San Francisco. Construction permits can close many curb spaces, sometimes entire blocks, for months or years. In some cases on-street car share spaces were taken off-line by construction, sometimes without warning, and held off-line for indeterminate lengths of time. These construction closures could lead to headaches for CSOs, in the form of citations and towed vehicles, and for car share users, by making service in certain locations unreliable or unavailable.

Events

Like other curb parking closures, space closures due to events (parades, fairs, etc.) caused disruptions in car share service. SFMTA's Temporary Sign Shop manages most event space closures and were able to alert CSOs with advance notice of curb closures, allowing CSOs to relocate affected vehicles and update their reservation systems and notify members. Event closures are usually much shorter than construction closures, and the SFMTA controls the process more completely, but future space location selection should include an evaluation of the potential for a given space to be affected by events.

Parking enforcement

While all illegal parking is problematic, illegal parking that blocks a car share space causes multiple problems: when a member tries to

return a vehicle and the permitted space is blocked, the member must park the vehicle at another space, which may be subject to other restrictions (e.g., meter payment or street sweeping). This can lead to a citation being issued to the vehicle since it is not parked at its assigned space and thus not exempt from restrictions. More importantly, this causes inconvenience for the member returning the vehicle and can also prevent other members from using the vehicle until the CSO can move the vehicle to its permitted pod.

San Francisco Transportation Code section 7.2.52 prohibits parking in designated car share spaces by vehicles other than those permitted for CSO member use, punishable by a $110 fine and immediate removal.

Thanks in part to refinements in car share parking space markings informed by the initial 2011 pilot, which make parking restrictions more evident, significant parking violations were less frequent in the Pilot, though not eliminated. From April 2015 through April 2016, 79 citations were issued to vehicles parked in on-street pods, with the Mint Street pod (C025 & C126) accounting for 13 citations and the 11th Street pod (C155 & C156) accounting for 10 citations. As with theft, vandalism, and construction closures, blocked car share pods will continue to be a factor for any operational on-street permit program adopted by the SFMTA, and permit-seeking CSOs will have to allow for some level of disruption as part of operating an on-street pod, as SFMTA continues to address improvements to enforcement effectiveness and efficiency.

Conversely, CSO vehicles sometimes received citations while parked in permitted spaces over the course of the pilot, some of which were issued in error and some legitimately. The most common cause of citations to CSO vehicles was street cleaning enforcement (TRC 7.2.22), where SFMTA parking control officers did not recognize the vehicle as a CSO vehicle and therefore exempt from enforcement (see Appendix I); in many such cases the vehicle was not adequately marked with the CSO's emblems on both sides and thus not compliant with conditions of the permit and liable to citation. Prominent marking of CSO vehicles is essential for many reasons, and CSOs were reminded to properly mark any vehicles in pilot on-street pods.

Space maintenance

One of the key premises of the Pilot permit is that car share vehicles parked in a permitted and marked space are exempt from street cleaning enforcement, but the space must be maintained and kept clean by the CSO (see Appendix G, Enforcement & Maintenance memo). This condition was met to SFMTA's satisfaction overall. During the course of the pilot, the SFMTA received about a dozen reports of car share spaces requiring maintenance

A few reports were received that maintenance crews visited car share spaces too late at night and the noise of their work was disturbing to neighbors. These comments were passed to the CSOs and maintenance schedules were adjusted.

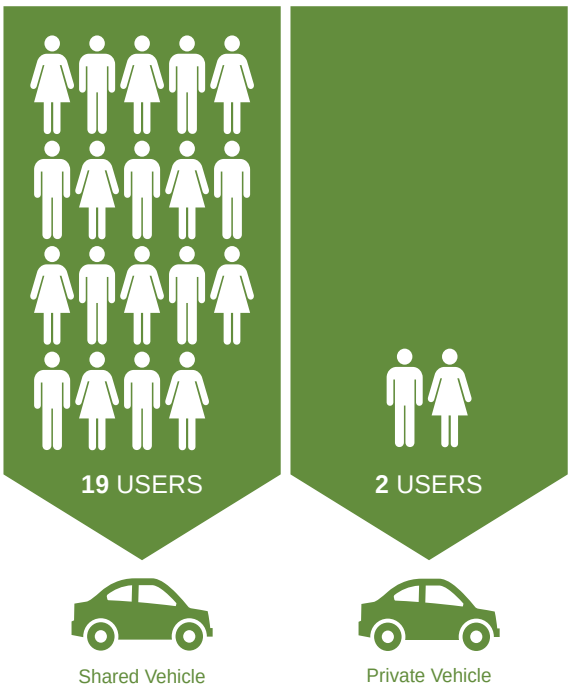
Weather and topography contribute to shifting and accumulating debris on San Francisco streets, and make the timing of scheduled car share maintenance visits an important consideration. CSO clean-ups should follow standard street cleaning passes whenever possible (in addition to other maintenance visits as warranted).

Equity and accessibility

The Pilot featured a simple three-zone system to address geographic and neighborhood equity, obliging CSOs to place car share pods throughout the city and pricing those permits to incentivize the placement of cars outside the City's dense core (see "Pilot participation requirements" above). This method helped with geographic equity but does not address other barriers to access.

While automobile ownership is itself quite expensive, car sharing has costs and economic hurdles that can exclude many households. The Pilot did not attempt to make any requirement of discounted member fees or expenses a condition of the Pilot car share parking permit, nor did it require CSOs to offer membership access to "unbanked" individuals (those without access to credit cards or other such financial tools). Such mechanisms were deemed to be impractical for the SFMTA to oblige or implement as part of this Pilot, but further mechanisms to address affordability and accessibility may be explored as part of a permanent on-street permit program.

Another equity concern is access for people with disabilities, whether vehicles equipped for operation by a disabled driver or vehicles equipped to serve disabled passengers (such as wheelchair vans). There is presently no obligation for an SFMTA-recognized CSO to provide accessible vehicles as a condition of either the off-street or pilot on-street permit, nor does San Francisco Planning Code require CSOs to provide accessible vehicles or wheelchair vans in code-mandated car share parking spaces in new development. City CarShare had offered its members some accessible vehicles and vans in its Bay Area fleet, but sold those vehicles as it pared down prior to being acquired by Getaround in late 2016. Staff will continue to explore practical methods to bring accessible vehicles into the city-permitted car share parking domain.



Outreach and community involvement

While most San Franciscans support the idea of car sharing, not all of them want a car share space on their block or in front of their house. As described above, the Pilot required participating CSOs to perform most of the outreach to neighbors or businesses in the vicinity of proposed car share spaces, but SFMTA staff were heavily involved in neighborhood discussions regarding many of the space locations proposed. Some neighbors view the installation of a car share pod as "losing" a parking spot for the neighborhood. However, results of the Pilot indicate that installing a car share space likely reduces the number of cars parked on the blocks around it because car sharing allows members to sell or avoid buying cars. As the Pilot demonstrated, one on-street space in the public right-of-way can be shared by as many as 19 individuals whereas a private vehicle is usually shared by only two people. Communicating the advantages of car share generally, and the reduction in car ownership specifically, will continue to be an important part of the public outreach and engagement for a potential future on-street car share program.

Expanding the uses of car share spaces

The Pilot revealed an interesting feature: if a given car share space was not well utilized, the car share vehicle would sit idle and neighbors would be upset that the space was being wasted. On the other hand, if the car share space was well utilized, the space would often be empty and neighbors would be upset that the space was often empty but could not be used by any of the neighbors. As a result, SFMTA staff considered whether any practical system of multiple uses for on-street car share pods could be developed, where the space could be a loading zone or taxi stand or TNC stand or other use when its car share car was being used and not in the space. Zipcar has experimented with "point to point" car sharing in other cities and they or another CSO might try using their network of fixed parking spaces as a "free floating" system of a sort.

As the SFMTA considers adopting and growing a car share parking permit program, it must consider how a system of fixed-point on-street car share spaces relates to other curb uses at present and

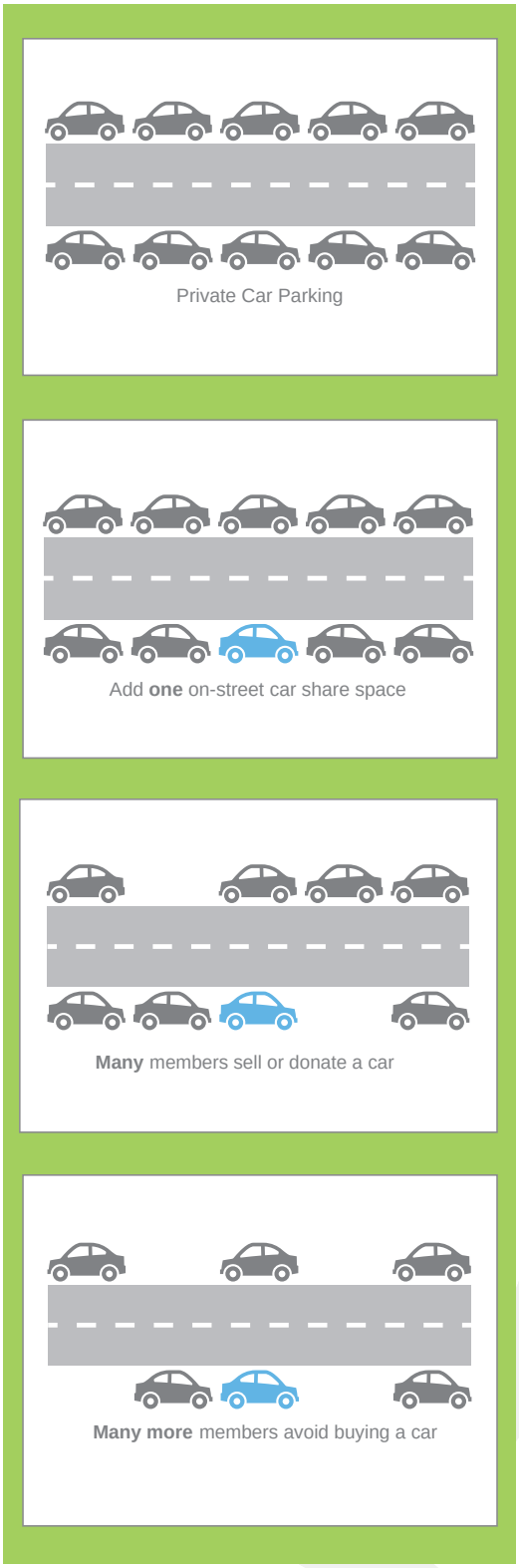
in the future, and how a system of fixed-point on-street car share pods might grow to serve other modes as they emerge and evolve.

Conclusion

Placing car share spaces on neighborhood streets increases access to, and visibility of, car sharing in a simple and direct manner. The Pilot effectively addressed the SFMTA's Strategic Plan goal to encourage the use of car sharing by those who live and work in San Francisco.

Operational complexities for on-street car share pods remain. In addition to vandalism and theft, construction curb closures present unique challenges for on-street car share service. Construction closures result in less reliable car sharing for members who depend on the service, from sudden disruptions to unannounced tow-aways and months-long construction projects with imprecise end dates. Construction permits are issued by San Francisco Public Works and utility companies. Improved coordination and communication between San Francisco Public Works and the SFMTA around closures, such as a shared real-time data base of closures, would lessen the unpredictable and disruptive effects on car share service and operation. All agencies should use one authoritative database to ensure sustainable operations for a future ongoing on-street program.

Selection and establishment of permitted on-street car share spaces will continue to be challenging due to community sensitivities around curb parking. The process used in the pilot for selection and review of permitted pods was adequate but expeditious, with CSOs carrying out most of the local outreach to communicate the proposed change, and SFMTA receiving comment from the community and CSOs and adjusting or setting aside proposals as a result of that outreach. Refined proposals were brought to standard engineering public hearings and further refined and then taken to the SFMTA Board for consideration and action. Though the Pilot was cleared for as many as


Private Car Parking
Add **one** on-street car share space
Many members sell or donate a car
Many more members avoid buying a car

900 parking spaces in its CEQA finding, the Pilot only implemented just over 200 spaces over two years.

Utilization of car share vehicles stationed in pilot on-street spaces was very strong, with the average on-street car share vehicle in use six hours of the day, five times the U.S. average for daily car use. The pilot found that 80% of the on-street car share vehicles were shared among more than ten people monthly. Car sharing as a whole has likely eliminated thousands of vehicles from San Francisco's streets, and the Pilot shows promise as a tool to extend the benefits of car sharing.

Next Steps

The lessons learned from this evaluation and the operational challenges that were observed during the Pilot will inform the recommendations for a potential ongoing on-street car share program. A set of recommendations for an ongoing program including criteria performance metrics will be presented to the SFMTA's Board of Directors in early 2017.

On-street car share permit conditions, prices, and specific terms may be adjusted, pending the Board's approval. Qualifications for participating car share organizations may be adjusted as well. If recommendations for an ongoing program are approved by the SFMTA Board, the SFMTA would solicit participants. Spaces established during the pilot will be expected to perform to SFTMA's standards and current spaces may be reconsidered or reassigned.

Appendices

Appendix A: Call for participation

On-street car share pilot – call for participation

PROJECT UPDATE

The San Francisco Municipal Transportation Agency (SFMTA) is carrying out a two-year pilot program to facilitate car sharing in San Francisco by making on-street parking spaces available in all neighborhoods in the City for use by qualified Car Share Organizations ("CSOs"). Participation in the car share pilot is open to qualified CSOs that commit to certain requirements regarding public outreach, data collection, vehicle placement, and vehicle availability (see On-street Car Share Pilot Participation Requirements). The pilot program will run from August 2013 through August 2015.

The SFMTA is now inviting CSOs to submit a brief statement of their qualifications for pilot participation, together with a list of on-street parking spaces which they seek to utilize as car share vehicle pods for the duration of the pilot. Parking space selection guidelines and a process timeline can be found below.

Car share parking space request lists should be returned to the SFMTA by October 9. Parking space requests received after October 9 will not be considered until the second round of parking space requests and review, to be carried out in 2014.

Interested CSOs are advised to review the following documents before submitting lists of parking spaces:

SFMTA Car Sharing Policy and Pilot Project document adopted by the SFMTA in July 2013

On-street Car Share Pilot Participation Requirements

On-street Car Share Vehicle Parking Permit Application (for reference - permit applications will be completed following review and public hearing)

REQUESTING PARKING SPACES

Interested qualified CSOs should prepare a Google Map identifying up to 150 on-street parking spaces, following the guidelines for parking space selection listed below. See example Google Map here for reference.

CSOs should email a brief statement of their qualifications for pilot participation, an exported KML file for their space selection map, and a shared link to the Google Map itself, to Andy.Thornley@sfmta.com, by October 9, 2013.

CSOs should *not* submit On-Street Car Share Parking Permit Applications at this time. Permit applications will be completed after all space requests have been received, reviewed and reconciled and outreach has been carried out for the parking spaces.

GUIDELINES FOR PARKING SPACE SELECTION

Must be an existing legal on-street public parking space

Must be a parking space under the jurisdiction of the SFMTA (no Port of SF spaces, no Recreation-Parks Department spaces, no Presidio/National Park Service spaces)

Port jurisdiction: http://www.sfport.com/index.aspx?page=182

Recreation and Parks Dept locations (roads *within* parks are not eligible for car share pilot permits): http://sfrecpark.org/parks-open-spaces/find-a-destination/

Presidio/National Park Service locations: http://www.nps.gov/goga/planyourvisit/upload/GOGAmap2.pdf

May not be a special-use parking space marked with colored curb *or a parking meter with a green top*

May not be the first parking space on the far side of an intersection (reserved for future blue zones -- see this diagram for clarification)

May not be located in a peak period tow away zone

Tow-away zone map & dataset:
http://sfpark.org/resources/regularly-scheduled-tow-away-zone-map/
http://sfpark.org/resources/regularly-scheduled-tow-away-zone-gis-data/

No more than two on-street car share parking spaces *for all CSOs combined* will be designated per block

Because of high levels of enforcement and availability issues in the initial pilot at the Valencia Street location **we discourage selection of spaces on major retail street faces**. Instead, we encourage selection of spaces just off major retail street faces, e.g. 4th Ave just south of Clement St and Clay St just east of Fillmore St, two on-street car share locations designated in the initial pilot. See the On-street car sharing pilot evaluation (Sept 2012) for more information on retail blocks and car share parking space placement in the initial pilot.

The SFMTA reserves the right to reject a space or remove it from the approvals process at any time and for any reason.

PROCESS TIMELINE

Now: CSOs express their interest and qualifications for pilot participation, compile lists of desired parking spaces, create Google Map of locations (see example here)

by October 9: CSOs email exported Google Map KML file to SFMTA (Andy.Thornley@sfmta.com)

Oct 10-Oct 14: SFMTA combines CSOs parking space requests, conducts top-level review

mid-October: SFMTA meets with CSOs to resolve parking space overlaps / overloads / conflicts, discuss coordinated outreach effort

October-November: Outreach by CSOs (with SFMTA support) to neighbors and merchants about parking space conversion; internal SFMTA and interagency review

November-December: SFMTA public hearing for on-street parking space conversion; parking space permit applications completed

Appendix B: Outreach cover letter

SFMTA
Municipal
Transportation
Agency

Edwin M. Lee, *Mayor*

Tom Nolan, *Chairman*
Malcolm Heinicke, *Director*
Joél Ramos, *Director*
Cheryl Brinkman, Vice-Chairman
Jerry Lee, *Director*
Cristina Rubke, *Director*

Edward D. Reiskin, *Director of Transportation*

February 24, 2014

On-Street Car Sharing Pilot Project

In July 2013 the San Francisco Municipal Transportation Agency (SFMTA) adopted a formal policy to guide the agency's facilitation of car sharing in its off-street parking lots and garages, as well as approving a two-year pilot to test the use of on-street parking spaces as car share spaces ("pods"). This off-street car share pilot builds upon lessons learned from a small-scale pilot of on-street car share pods carried out in 2011 & 2012, and will make as many as 900 on-street parking spaces available across all districts of the city for use by qualified car share organizations (CSOs) over the two years of the pilot.

Car sharing has been shown to reduce household vehicle ownership rates, parking demand, vehicle miles traveled, and greenhouse gas emissions. In combination with the SFMTA's efforts to better utilize transportation demand management strategies, improve parking management, and make transit, walking, and bicycling more attractive, car sharing plays a role in helping achieve these goals.

This project aims to expand the availability of car sharing across San Francisco, increase the usage of car sharing, and preserve or increase choice of CSOs. CSOs report that one of the key challenges for expanding car sharing is the difficulty of acquiring parking spaces for car sharing parking or "pods", which are locations where customers can pick up a car sharing vehicle. SFMTA policy can encourage and facilitate car sharing, and thereby realize more of its benefits.

Participation in the on-street car share pilot is open to qualified CSOs (as defined in the San Francisco Transportation Code) who commit to further requirements for outreach, data collection, pod placement, and vehicle availability.

For more information about the SFMTA car share policy and on-street pilot program, please refer to the SFMTA Car Sharing Policy and Pilot Project document (available on the SFMTA website at sftma.com), or contact Andy Thornley at (415) 701-4213 or email Andy.Thornley@sfmta.com.

Appendix C: Requirements for Pilot Participation

SFMTA
Municipal Transportation Agency

On-street Car Share Pilot Participation Requirements

September 2013

The San Francisco Municipal Transportation Agency (SFMTA) has implemented a two-year pilot program to facilitate car sharing in San Francisco by making on-street parking spaces available in all neighborhoods in the City for use by qualified Car Share Organizations ("CSOs"). Participation in the car share pilot is open to qualified CSOs that commit to certain requirements regarding public outreach, data collection, vehicle placement, and vehicle availability. The pilot program will run from August 2013 through August 2015.

Requirements for Pilot Participation

Participants in the SFMTA On-Street Car Sharing Pilot ("Pilot") must satisfy all of the following requirements:

A. On-Street Car Share Vehicle Parking Permit Requirements:

- Satisfy the Transportation Code definition of a Car Share Organization: "(a) public, private, or non-profit entity that provides preapproved members access to a citywide network of at least ten (10) motor vehicles in the City and County of San Francisco."
- Vehicles may only be available to members by reservation on an hourly basis, or in smaller intervals, and at rates which vary by time or by time and distance.
- Vehicles are available to members at an unstaffed self-service location and available for pick-up by members on a twenty-four hour, seven days per week basis.
- Automobile insurance must be provided for each car share vehicle for each member using the vehicle during the period of use.
- The CSO emblem must be prominently displayed on both the driver and passenger sides of the vehicle.
- Vehicles must be less than seventy-two (72) inches in height, and emit low levels of emissions for the applicable vehicle class. Preference will be given to car share vehicles that meet the California Air Resources Board's standard for a Super Ultra Low Emissions Vehicle.
- Vehicles must be available to members for rental at least seventy-five (75) percent of the time during any given month when the vehicle is parked in a designated on-street car share parking space at any time during that month.
- Vehicles must be made available to members citywide with at least fifteen (15) percent located in On-Street Car Share Zone 2 and fifteen (15) percent in On-Street Car Share Zone 3.

B. Additional Requirements:

- CSOs must provide an outreach plan addressing geographic equity and cultivating support for productive utilization of on-street car share vehicles.

- CSOs must provide a quarterly summary of outreach activities used to promote car sharing at all permitted on-street locations for the first nine months of operation. The SFMTA will review the effectiveness of these outreach efforts and make recommendations for future outreach efforts.
- CSOs must provide to the SFMTA at the beginning of the Pilot and on a quarterly basis the following information:
    1. The total number of members who reside in San Francisco by zip code.
    2. A list of all current vehicle locations (off-street and on-street) where members may pick up or drop off a vehicle in San Francisco. Locations should be identified by street address and/or on-street car share permit number. The list should identify how many vehicles are located at each identified location.
    3. For each permitted on-street car share parking space, date and time of the start and end of all trips, as well as the miles travelled (VMT) for that trip.
    4. For each permitted on-street car share parking space, average utilization rate (including the percentage of time that a vehicle was used, when each on-street space or vehicle was not available for use by members, and when each vehicle was parked but not used by a member).
    5. For each permitted on-street car share parking space, average unique users per vehicle per month.
- CSOs will be required to survey their members about travel behavior, vehicle ownership, and car sharing use, and share the survey results with the SFMTA at least twice during the Pilot (approximately June 2014 and June 2015). The SFMTA and CSOs will develop a survey for CSOs to submit to their members and collect responses.

Appendix D: Permit Application

SFMTA
Municipal Transportation Agency

ON-STREET CAR SHARE VEHICLE PARKING PERMIT APPLICATION

Application Type (check one): ☐ New ☐ Renewal ☐ Transfer/Temporary for space number _____

Applicant Information

Name of Car Share Organization Applicant			
Contact Name			
Mailing Address			
Phone Number 1		Phone Number 2	
Email Address			

Location Information

Designated On-Street Car Share Parking Space Number		Location Description	

Applicant certifies that any vehicle utilizing this parking space meet the following criteria:

☐	The Car Share Vehicle may only be available to members by reservation on an hourly basis, or in smaller intervals, and at rates which vary by time or by time and distance.
☐	The Car Share Vehicle is available to members at an unstaffed self-service location and available for pick-up by members on a twenty-four hour, seven day per week basis.
☐	The Car Share Vehicle is available to members for rental at least seventy-five (75) percent of the time during any given month when the vehicle is parked in the parking space at any time during that month.
☐	Automobile insurance is provided for the Car Share Vehicle for each member using the vehicle during the period of use.
☐	The emblem of the Car Share Organization is prominently displayed on both sides of the vehicle utilizing the space.
☐	The Car Share Vehicle is less than seventy-two (72) inches in height.
☐	The Car Share Vehicle emits low levels of emissions for the applicable vehicle class.

ON-STREET CAR SHARE VEHICLE PARKING PERMIT TERMS AND CONDITIONS

1. **Indemnification**

Permittee shall indemnify and save harmless City and its officers, agents and employees from, and, if requested, shall defend them against any and all loss, cost, damage, injury, liability, and claims thereof for injury to or death of a person, including employees of Permittee or loss of or damage to property, arising directly or indirectly from Permittee's performance of this Permit, including, but not limited to, Permittee's use of facilities or equipment provided by City or others, regardless of the negligence of, and regardless of whether liability without fault is imposed or sought to be imposed on City, except to the extent that such indemnity is void or otherwise unenforceable under applicable law in effect on or validly retroactive to the date of this Agreement, and except where such loss, damage, injury, liability or claim is the result of the active negligence or willful misconduct of City and is not contributed to by any act of, or by any omission to perform some duty imposed by law or agreement on Permittee, its subpermittees or either's agent or employee. The foregoing indemnity shall include, without limitation, reasonable fees of attorneys, consultants and experts and related costs and City's costs of investigating any claims against the City. In addition to Permittee's obligation to indemnify City, Permittee specifically acknowledges and agrees that it has an immediate and independent obligation to defend City from any claim which actually or potentially falls within this indemnification provision, even if the allegations are or may be groundless, false or fraudulent, which obligation arises at the time such claim is tendered to Permittee by City and continues at all times thereafter. Permittee shall indemnify and hold City harmless from all loss and liability, including attorneys' fees, court costs and all other litigation expenses for any infringement of the patent rights, copyright, trade secret or any other proprietary right or trademark, and all other intellectual property claims of any person or persons in consequence of the use by City, or any of its officers or agents, of articles or services to be supplied in the performance of this Permit.

2. **Designation of On-Street Car Share Vehicle Parking Spaces**

Permittee understands that the SFMTA has final authority over the number and location of on-street Car Share Vehicle Parking Spaces to be designated for the exclusive use of Car Share Vehicles. Permittee further understands that designation of such Parking Spaces are

Page 1 of 2

SFMTA – On-street Car Share Vehicle Parking Permit Application

subject to approval by resolution of the SFMTA Board of Directors. The SFMTA reserves the ability to temporarily or permanently remove any designated Car Share Vehicle Parking Space for any reason.

3. **Permit Revocation**

The SFMTA reserves the right to revoke a Car Share Vehicle Permit at any time upon written notice of revocation sent to both the Permittee's mailing and email addresses listed on the Permittee's Application submitted to the SFMTA. A notice of revocation may also be placed on the Car Share Vehicle to which the Car Share Vehicle Permit was issued.

The Permittee agrees to surrender such permit in accordance with the instructions in the notice of revocation. In the event that the SFMTA revokes a Car Share Vehicle Permit, Permittee shall remove the Car Share Vehicle from the designated Car Share Vehicle Parking Space within five business days from the date the notice of revocation was mailed and emailed by the SFMTA to the Permittee.

If the Permittee wishes to contest the revocation of a permit, the Permittee may call (415) 701-5400 or email MTAHearings@sfmta.com to explain any basis for why the permit should not be revoked.

In circumstances that pose a serious threat to public health or safety, the SFMTA reserves the right to immediately revoke a Car Share Vehicle Permit effective on the date the notice of revocation is mailed and emailed to the Permittee. The SFMTA shall state the public health or safety reasons that require immediate revocation in the notice of revocation. In such circumstances, the Permittee shall be required to immediately remove the Car Share Vehicle from the designated Car Share Vehicle Parking Space.

4. **Maintaining Car Share Vehicle Parking Space**

Permittee shall be responsible for maintaining the designated Car Share Vehicle Parking Space and twenty-five feet in front and behind the space. Permittee shall maintain this area in such a manner that it shall remain free of debris, trash, glass, garbage, or other obstacles at a level consistent with the surrounding parking spaces to the satisfaction of the SFMTA and Department of Public Works. Permittee shall sweep and clean the parking space as needed and as determined by SFMTA.

5. **Car Share Signage**

Only the SFMTA can approve and install signage and sidewalk and/or street markings designating a Car Share Vehicle Parking Space in or around the on-street parking space. Permittee shall not install, paint or mark any other signs, markings, or other demarcations on City property including on the street or the sidewalk.

Only the SFMTA can remove signage and sidewalk and/or street markings designating a Car Share Vehicle Parking Space in or around the on-street parking space. SFMTA is not responsible for any damage caused to Permittee installed signage and/or markings. Permittee can recover any such signage from the SFMTA Sign Shop (415-558-7936).

The SFMTA is not responsible for any damage caused to signs and/or markings that the permittee has provided to SFMTA.

6. **Compliance with Applicable Law**

Permittee represents and certifies, under penalty of perjury, that the Car Share Organization and the Car Share vehicle on whose behalf the Permittee is seeking this permit is in compliance with all California Vehicle Code requirements, Car Share Vehicle Parking Permit requirements, and Car Share Organization criteria set forth in the City's Transportation Code.

7. **Compliance with Additional Terms and Conditions**

Permittee agrees to comply with any and all additional written terms and conditions required by the SFMTA for participation in the On-Street Car Share Program. Permittee acknowledges that these written terms and conditions may be changed, amended, or revised at any time by the SFMTA upon written notification to the Permittee. By acceptance of a Car Share Vehicle Parking Permit, Permittee agrees to comply with any changed, amended or revised written terms and conditions within thirty (30) days of written notification by the SFMTA. Failure to comply with any or all terms and conditions required by the SFMTA for participation in the On-Street Car Share Program can result in the revocation of any or all Car Share Vehicle Permits issued to the Permittee upon written notice of revocation by the SFMTA.

By signing this application, the applicant verifies on behalf of the Car Share Organization that all the information provided is true, that any vehicle utilizing this parking space will only be used only for car share related purposes and that applicant agrees to the attached On-Street Car Share Vehicle Parking Permit Terms and Conditions.	
Applicant Signature	
Print Name & Date	

Appendix E: CSO Survey Instrument

SFMTA on-street car share pilot "before" member survey DRAFT

[Car share company], in partnership with the SFMTA, invites you to take a short survey on your use of car sharing. It should take no more than 5 minutes . The purpose of this survey is to understand your opinions about the provision of on-street parking for car sharing vehicles.

The information that is obtained in connection with this study will not be linked to you in anyway. Your participation in this study is anonymous. You may skip any questions that you do not wish to answer.

1. When did you join [Car share company]?

Month: _____

Year: _____

2. Have you used on-street car sharing?

a. No

b. Yes

If NO to #2, skip to:

Please indicate whether you strongly agree, agree, disagree, or strongly disagree with the following statements based on your experience with [Car share company].

I have not used on-street car sharing primarily because (please select all that apply):

a. I was not aware of on-street car sharing.

b. I do not know where the on-street carsharing vehicles are located.

c. Vehicles stored in lots and garages are closer.

d. Vehicles stored in lots and garages are safer.

e. Parking on-street carsharing vehicles in back on-street spaces is challenging.

f. On-street carsharing vehicles have been reserved by others when I want them.

g. Another reason entirely:

a. I have been using vehicles stored in lots and garages:

b. Strongly agree

c. Agree

d. Neutral (no opinion)

e. Disagree

f. Strongly disagree

g. I was not aware of on-street car sharing.

It would be easier for me to access [Car share company] vehicles on the street than it is to access [Car share company] vehicles in off-street lots and garages (please select one response).

a. Strongly agree

b. Agree

c. Neutral (no opinion)

d. Disagree

e. Strongly disagree

If I had access to [Car share company] vehicles parked on the street, I would use car sharing (please select one response):

a. Much more often

b. More often

c. About the same (has would have had no impact)

d. Less often

e. Much less often

f. I have changed how often I used car sharing, but not because of access to on-street parking

If YES to #2, skip to:

Please indicate whether you strongly agree, agree, disagree, or strongly disagree with the following statements based on your experience with [Car share company].

I prefer to access car sharing vehicles on the street than in off-street lots and garages (please select one response).

a. Strongly agree

b. Agree

c. Neutral (no opinion)

d. Disagree

e. Strongly disagree

As a result of on-street car sharing, I find it easier to access [Car share company] vehicles (please select one response):

a. Strongly agree

b. Agree

c. Neutral (no opinion)

d. Disagree

e. Strongly disagree

As a result of having access to on-street parking for car sharing, I now use car sharing (please select one response):

a. Much more often

b. More often

c. About the same (has had no impact)

d. Less often

e. Much less often

f. I have changed how often I used car sharing, but not because of access to on-street parking.

g. I have not used carsharing (at all) for quite some time.

3. Having more access to expanding on-street parking for car sharing would further enhance my mobility in San Francisco (please select one response).

a. Strongly agree

b. Agree

c. Neutral (no opinion)

d. Disagree

e. Strongly disagree

4. As a result of my use of car sharing (overall), I drive my personal car… (please select one response)

a. Much more often

b. More often

c. About the same (car sharing has had no impact)

d. Less often

e. Much less often

f. I have changed how I use my car, but not because of car sharing.

g. I did not own a car before and I do not own a car now. I do not own a car.

5. Since you started using [Car share company], have you sold, donated, or otherwise gotten rid of a personal household vehicle or considered selling a personal vehicle? (Please select one response.)

a. No

b. Sold or donated a household vehicle

c. Considered selling a personal vehicle

If answered B or C in #5, skip to:

How important has access to a car sharing service(s) (overall) use been in your decision to sell or consider selling a personal vehicle (please select one response)?

a. Very important

b. Somewhat important

c. Not at all important

d. Don't know

How important has access to designated on-street carsharing parking for car sharing use been in your decision to sell or consider selling a personal vehicle (please select one response)?

a. Very important

b. Somewhat important

c. Not at all important

d. Don't know

6. Within your neighborhood, what is your opinion of on-street parking supply (or the amount of on-street parking)? [Please select one response.]

a. Way too little parking; I wish there was more

b. It would be nice to have more parking.

c. There is just enough parking.

d. It would be nice to have a little less parking.

e. There is too much parking;, there should be less.

f. Unsure

g. No opinion

h. Other: _____

Feel free to offer any further description of how access to on-street car sharing vehicles has influenced your travel behavior or lifestyle within San Francisco (optional).

Demographic information (7 questions):

This information is being gathered for demographic purposes only. This information will not be linked to you in any way, and you may skip any questions that you do not wish to answer.

Please indicate your HOME zip code: _____

Please indicate your WORK zip code: _____

Approximately how long (in years and months have you lived in your HOME Zip code? (e.g., 1 year and 9 months)

Are you female or male Please indicate your gender.?

a. Female F

b. Male M

c. Prefer not to answer

In what year were you born?

Year: (drop down menu)

What is your age ?

a. 16-17 years old

b. 18-24

c. 25-33

d. 33-44

e. 45-54

f. 55-64

g. 65 years or older

h. Prefer not to answer

Approximately what was your gross (pre-tax) household income in 2013 ?

1. Less than $10,000

2. $10,000 to $14,999

3. $15,000 to $24,999

4. $25,000 to $34,999

5. $35,000 to $49,999

6. $50,000 to $74,999

7. $75,000 to $99,999

8. $100,000 to $149,999

9. $150,000 to $199,999

10. $200,000 or more

11. Prefer not to answer

Approximately what is your expected household income this year?

a. Less than $10,000

b. $10,000 to $14,999

c. $15,000 to $24,999

d. $25,000 to $34,999

e. $35,000 to $49,999

f. $50,000 to $74,999

g. $75,000 to $99,999

h. $100,000 to $149,999

i. $150,000 to $199,999

j. $200,000 or more

k. Prefer not to answer

Which of the following best describes your racial or ethnic background? (Please check all that apply.)

a. Asian / Pacific Islander

b. Black / African American

c. Caucasian

d. Hispanic / Latino

e. Indian / Pakistani

f. Middle-Eastern or Arab

g. Native American / Alaska Native

h. Other, please specify:

i. Prefer not to answer

j. Decline to Answer

What is your occupational status? (Please check all that apply.)

a. Full-time student

b. Part-time student

c. Employed full-time

d. Employed part-time

e. Stay-at-home parent

f. Unemployed, looking for work

g. Unemployed, not looking for work

h. Retired

i. Prefer not to answer

Appendix F: Data Dictionary

FIELD NAME	DEFINITION	EXAMPLE	METRIC
Permit ID	Unique identifier for the on-street car sharing space; refers to CSO, location, permit issuance date, permit expirtation date, and other information associated with the permit.	Z001 (indicates CSO and permit number)	Operations
Month/Year	Each record must indicate the month and year of the data collection	Jan-14	
Days of operation	Total number of days the on-street space was available for CSO use	28	
Days of closure	Total number of days the on-street space was unavailable for CSO use	3	
Reason for closure	Details reason for closure, if the on-street space was unavailable for CSO use	Construction ("NA" if no closure)	
Total reservations	The monthly total number of car share vehicle reservations completed for the on-street space; every reservation completed will be interpreted as a trip taken by the car share vehicle.	38	Utilization
Reservations per day	Daily number of trips made through the day; formula measured as =(Total reservations)/(Days of operation)	1.4	
Total reservation miles	Total distance traveled, in miles, by the car share vehicle(s) occupying the on-street space	1,287.60	
Average miles per reservation	Monthly average number of miles traveled per reservation; formula measured as =(Total reservation miles)/(Total reservations)	33.9	
Total reservation hours	**Total hours that the on-street space's car share vehicle was in use for the month, rounded to the nearest quarter hour**	**230.75**	
Average hours per reservation	Average duration, in hours, of each car share trip taken, for the month	6.07	
Total hours of operation	Total hours that the car share space was in operation for the month; formula measured as =(Days of operation)*24	672.00	

Monthly utilization rate	**Share of total hours that the car share vehicle was in use out of the total hours of operation; formula measured as =(Total reservation hours)/Total hours of operation**	**34.3%**	
Unique reservers	**Total number of unique members who used a car share vehicle at the on-street space; indicates how many individuals benefited from the car sharing space**	**27**	

Appendix G: Enforcement Memo

On-Street Car Share Pilot Parking Permits – Enforcement and Maintenance

September 2014

The SFMTA is conducting a pilot of on-street car sharing in designated permitted parking spaces. The pilot program was approved by the SFMTA Board of Directors in July 2013, and permitted spaces have been approved by SFMTA Board actions following standard review and noticing. The on-street car share parking permit is defined and regulated under SF Transportation Code Section 911. The pilot will run through August 2015, and may be extended beyond that.

Three car share organizations (CSO) have qualified to participate in the pilot:
City CarShare, Zipcar, and Getaround

Permitted car share parking spaces are marked with red curb, a solid white stripe outline, and a NO STOPPING sign and CSO emblem on a short sign post. Here is a City CarShare space at 38 Harriet Street:

The red & white NO STOPPING sign faces the street and displays the permitted CSO's emblem in the center of the sign. On the sidewalk-facing side of the post, a full-sign CSO emblem and information are displayed:

street face

sidewalk face

Sign pairs for Zipcar and Getaround work the same way, here are emblems for Zipcar and Getaround:

Zipcar emblem

Getaround emblem

Car share vehicles *will not* display a car share parking permit (as they had done in the initial 2011 car share pilot). CSOs may place *any* member-available vehicle in a permitted car share parking space, as long as the vehicle displays the CSO's emblem prominently on each side of the vehicle (see the photograph of 38 Harriet Street above), and the vehicle is less than 72 inches in height.

A list of on-street car share spaces will be updated and provided separately.

Enforcement

Okay – no cite: CSO emblem on NO STOPPING sign *matches* CSO emblem on vehicle parked in space

Not okay – cite and order tow: CSO emblem on NO STOPPING sign *does not match* CSO emblem on vehicle parked in space

For example:

- City CarShare space + City CarShare vehicle – pass 'em by
- Zipcar space + City CarShare vehicle – cite & tow 'em
- City CarShare space + anonymous car – cite & tow 'em

Car share vehicles parked in designated on-street spaces are exempt from street cleaning regulations and RPP time limit restrictions.

Maintenance

Maintenance of on-street car share parking is an explicit condition of the on-street car share permit:

> Permittee shall be responsible for maintaining the designated Car Share Vehicle Parking Space and twenty-five feet in front and behind the space. Permittee shall maintain this area in such a manner that it shall remain free of debris, trash, glass, garbage, or other obstacles at a level consistent with the surrounding parking spaces to the satisfaction of the SFMTA and Department of Public Works. Permittee shall sweep and clean the parking space as needed and as determined by SFMTA.

If maintenance problems are observed in a designated on-street car share parking space it should be reported to SFMTA Parking / Sustainable Streets. CSOs who fail to maintain any of their spaces will be warned, and if SFMTA and/or DPW aren't satisfied with their response and ongoing maintenance performance we'll revoke the permit, and/or make the space available to another qualified pilot participant CSO.

SFMTA Parking Control Officers: Please note CSO and location of parking space (e.g. "Zipcar, 300 block of Washington St") and nature of maintenance problem on the back of the DPT Maintenance Request form for any problems observed at car share parking spaces.

DPW street cleaning: Please report location of parking space (e.g. "Zipcar, 300 block of Washington St") and nature of maintenance problem on the back of the DPT Maintenance Request form for any problems observed at car share parking spaces.

Andy Thornley
SFMTA Parking / Sustainable Streets

Appendix H: Implemented spaces

Space ID	Address	Operational Date
C032	38 Harriet St	10/1/2011
C043	2490 Clay St	10/1/2011
C047	1505 Taylor St	10/1/2011
C053	590 Valencia St	10/1/2011
C055	2581 Polk St	10/1/2011
C081	712 Bosworth St	11/1/2011
C088	708 Judah St	11/1/2011
C101	1650 Carroll St	11/1/2011
C102	3872 Judah St	11/1/2011
C106	3777 Judah St	11/1/2011
C137	2475 3rd St	11/1/2011
C082	305 4th Ave	2/1/2012
G002	270 7th Street	1/20/2014
G089	333 Grant Avenue	10/10/2014
Z029	1309 20th Ave	10/11/2014
Z116	1309 20th Ave	10/11/2014
C097	2314 Clement St	10/13/2014
G070	399 4th Street	10/14/2014
Z076	326 Gennessee St	10/15/2014
Z134	326 Gennessee St	10/15/2014
Z061	289 Linden St	10/15/2014
Z107	289 Linden St	10/15/2014
Z151	900 20th St	10/15/2014
Z152	900 20th St	10/15/2014
C155	33 11th St	10/16/2014
C156	33 11th St	10/16/2014
G028	1932 Pine Street	11/2/2014
G036	2860 Laguna Street	11/2/2014
Z113	1391 34th Ave	11/18/2014
Z008	1391 34th Ave	11/18/2014
Z003	715 33rd Ave	12/3/2014
Z093	715 33rd Ave	12/3/2014
G026	1895 Vallejo Street	12/4/2014
Z098	511 Balboa St	12/4/2014
Z031	511 Balboa St	12/4/2014
Z032	795 Funston Ave	12/4/2014
Z048	167 Euclid Ave	12/4/2014
Z100	167 Euclid Ave	12/4/2014
Z112	1779 25th Ave	12/4/2014
Z007	1779 25th Ave	12/4/2014
Z074	4184 20th St	12/4/2014
Z149	4184 20th St	12/4/2014
Z097	795 Funston Ave	12/4/2014

Space ID	Address	Operational Date
G031	151 Noe Street	12/11/2014
Z071	351 Andover St	12/12/2014
Z135	351 Andover St	12/12/2014
G020	1412 23rd Avenue	12/14/2014
G042	2146 Lawton Street	12/14/2014
C030	1599 Grant Ave	12/15/2014
G144	300 Sanchez St	12/15/2014
G041	6143 Fulton Street	12/26/2014
C004	138 Diamond St	12/29/2014
C015	3361 19th St	12/29/2014
C086	2798 McAllister	12/29/2014
C075	1400 21st Ave	12/29/2014
C078	399 9th Ave	12/29/2014
C110	138 Diamond St	12/29/2014
C119	3361 19th St	12/29/2014
C145	1400 21st Ave	12/29/2014
C098	1398 36th Ave	12/30/2014
C104	101 Onondaga Ave	12/30/2014
C151	101 Onondaga Ave	12/30/2014
C024	599 Florida St	12/31/2014
C070	2401 22nd Ave	12/31/2014
G085	536 Shrader Street	1/1/2015
C034	5 Pearl St	1/2/2015
C046	3801 23rd St	1/2/2015
C080	3 Brook St	1/2/2015
Z058	1610 Laguna St	1/6/2015
Z101	1610 Laguna St	1/6/2015
Z064	1411 Jones St	1/6/2015
Z083	1411 Jones St	1/6/2015
Z060	516 Ivy St	1/6/2015
Z103	516 Ivy St	1/6/2015
Z013	1928 Ocean Ave	1/7/2015
Z133	1928 Ocean Ave	1/7/2015
Z034	2731 14th Ave	1/7/2015
Z122	2731 14th Ave	1/7/2015
C063	2940 22nd St	1/8/2015
C010	780 Capp St	1/9/2015
C019	96 San Jose Ave	1/9/2015
C109	3 Henry St	1/9/2015
C114	780 Capp St	1/9/2015
C122	96 San Jose Ave	1/9/2015
C003	3 Henry St	1/9/2015
G043	2074 Moraga St	1/12/2015

Space ID	Address	Operational Date
C006	1490 Hayes St	1/13/2015
C111	1490 Hayes St	1/13/2015
G024	424 Octavia Street	1/13/2015
Z067	1604 20th St	1/15/2015
Z143	1604 20th St	1/15/2015
G014	1204 Green Street	1/17/2015
G059	552 Hyde Street	1/17/2015
G090	180 Clay Street	1/20/2015
C042	3 Lapidge St	1/23/2015
G084	678 Stanyan Street	1/23/2015
G153	678 Stanyan Street	1/23/2015
G062	2 S Park Ave	1/27/2015
G063	2 S Park Ave	1/27/2015
G040	3551 Cabrillo Street	1/28/2015
C028	90 Hawthorne St	1/30/2015
C033	415 Noe St	1/30/2015
C023	903 Mason St	1/30/2015
C125	903 Mason St	1/30/2015
C016	248 14th St	1/30/2015
C059	1700 Washington St	1/30/2015
C120	248 14th St	1/30/2015
C129	90 Hawthorne St	1/30/2015
C131	415 Noe St	1/30/2015
Z127	4653 3rd St	1/30/2015
Z018	2770 Newhall St	1/30/2015
Z125	2770 Newhall St	1/30/2015
Z020	1530 Evans Ave	1/30/2015
Z128	1530 Evans Ave	1/30/2015
Z145	741 20th St	1/30/2015
Z069	741 20th St	1/30/2015
Z144	716 Pennsylvania St	1/30/2015
Z068	716 Pennsylvania St	1/30/2015
Z170	80 Mint St	1/30/2015
Z171	80 Mint St	1/30/2015
Z126	1620 Revere Ave	1/30/2015
Z019	4653 3rd St	1/30/2015
Z021	1620 Revere Ave	1/30/2015
C040	601 Natoma St	2/1/2015
G091	99 Jackson Street	2/1/2015
G035	2904 Webster Street	2/15/2015
G003	888 Haight Street	3/1/2015
G080	1302 Post Street	3/1/2015
G029	200 Fillmore St	3/1/2015

Space ID	Address	Operational Date
G138	1501 Oak Street	3/1/2015
G076	1715 O'Farrell Street	3/1/2015
Z016	10 Pope St	3/1/2015
Z129	10 Pope St	3/1/2015
Z172	1201 4th St	3/1/2015
G015	590 Lombard Street	3/1/2015
G001	780 4th Avenue	3/15/2015
G071	668 Townsend Street	3/31/2015
Z168	195 Portola Dr	4/15/2015
Z167	195 Portola Dr	4/15/2015
Z001	390 28th Ave	6/4/2015
Z002	3300 Clement St	6/4/2015
Z092	3300 Clement St	6/4/2015
Z115	1779 38th Ave	6/4/2015
Z010	1779 38th Ave	6/4/2015
Z012	2393 40th Ave	6/4/2015
Z120	2393 40th Ave	6/4/2015
Z094	390 28th Ave	6/4/2015
C011	901 Carolina St	6/9/2015
C045	283 Octavia St	6/9/2015
C054	2475 3rd St	6/9/2015
C076	799 Cole St	6/9/2015
C115	901 Carolina St	6/9/2015
C132	3545 19th St	6/9/2015
C012	700 Greenwich St	6/10/2015
C089	720 Bosworth St	6/10/2015
C116	700 Greenwich St	6/10/2015
C135	1505 Taylor St	6/11/2015
Z049	1915 Grove St	6/24/2015
Z054	1288 McAllister St	6/24/2015
Z106	770 Scott St	6/24/2015
Z045	370 Lyon St	6/24/2015
Z110	370 Lyon St	6/24/2015
Z111	1915 Grove St	6/24/2015
Z104	1288 McAllister St	6/24/2015
Z153	207 Brannan St	6/24/2015
Z154	207 Brannan St	6/24/2015
Z161	806 Leavenworth St	6/24/2015
Z162	806 Leavenworth St	6/24/2015
Z159	983 Jones St	6/24/2015
Z160	983 Jones St	6/24/2015
Z052	770 Scott St	6/24/2015
Z165	174 Page St	7/17/2015

Space ID	Address	Operational Date
Z166	174 Page St	7/17/2015
C008	1 Hartford St	7/23/2015
C022	1901 15th St	7/23/2015
C124	1901 15th St	7/23/2015
Z141	5 Beaver St	7/23/2015
Z046	5 Beaver St	7/23/2015
C090	198 29th St	7/24/2015
G077	1702 Fell Street	8/1/2015
G079	504 Dolores St	8/1/2015
G023	704 Steiner Street	8/1/2015
G065	704 Steiner Street	8/1/2015
G211	1066 Minnesota St	8/1/2015
G224	900 Judah St	8/1/2015
G146	1702 Fell Street	8/1/2015
G225	900 Judah St	8/1/2015
G233	1285 Lombard St	8/1/2015
G234	1285 Lombard St	8/1/2015
G235	1488 Green St	8/1/2015
G236	1488 Green St	8/1/2015
G251	1245 5th Ave	8/1/2015
G204	1215 Treat St	8/1/2015
G205	1215 Treat St	8/1/2015
G210	1066 Minnesota St	8/1/2015
C069	786 Ulloa St	8/11/2015
C074	501 Bartlett St	8/17/2015
Z028	897 Cole St	8/17/2015
Z138	897 Cole St	8/17/2015
Z015	23 Excelsior Ave	9/4/2015
Z132	23 Excelsior Ave	9/4/2015

Appendix I: Pilot spaces removed, relocated and modified

Spaces removed

- 24th St at Sanchez St (G099): high-demand metered space
- Excelsior Ave at Mission St (Z132): intersection daylighting (one of a pair, one remains)
- Mason St at California St (C023 & C125): frequently closed for events
- O'Farrell St at Fillmore St (G076): closed weekly for Fillmore farmers market and other events
- Parnassus Ave at Clayton St (G019): Muni operations conflict (tight turn)
- Treat Ave at 25th St (G204 & G205): community concerns
- West Portal Ave at Ulloa St (G106): high-demand metered space
- York St at 24th St (C058): merchant concerns over high-demand metered space
- Hawthorne St at Folsom St (C028 & C129): closed for Public Works access

Spaces relocated

- 11th St at Market St (C155, C156): has been removed for Muni streetcar maintenance facility; will be relocated
- 7th Street at Folsom St (G002): will be relocated
- Diamond St between 18th & 19th St (C004 & C110): moved from west side to east side of Diamond St (fronting rec center playground)

Spaces adjusted

- Haight St at Divisidero (G003): made the "batter's box" smaller by a few feet to better accommodate adjacent driveway
- Linden Alley (Z061 & Z107): granite streetscape element was moved nearby to help reduce collisions by car share vehicle

Spaces transferred between CSOs

- 4th St at Mission Rock (Mission Bay) (C048 transferred to Z170)
- Mint St at Mission St (C025 & C126 transferred to Z171 & Z172)
- Portola at Clipper (C064 & C141transferred to Z167 & Z168)